

FIG 1. A

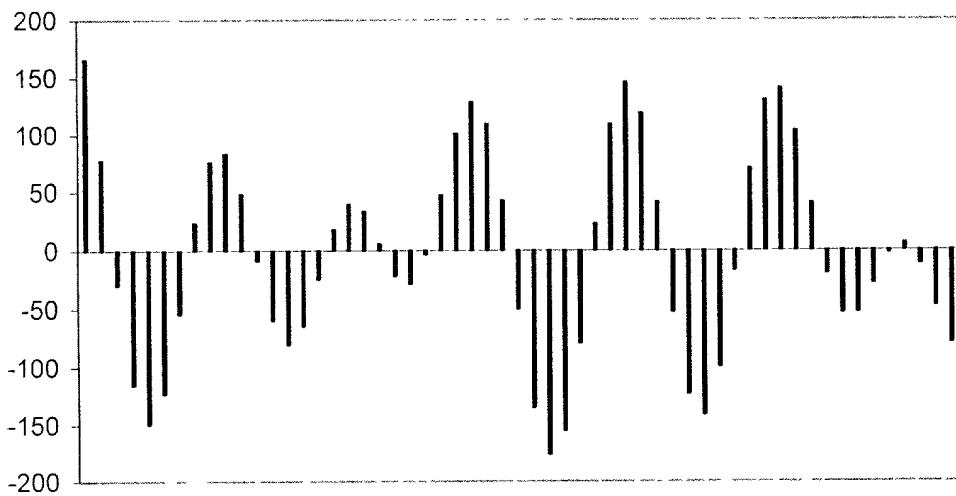


FIG 1. B

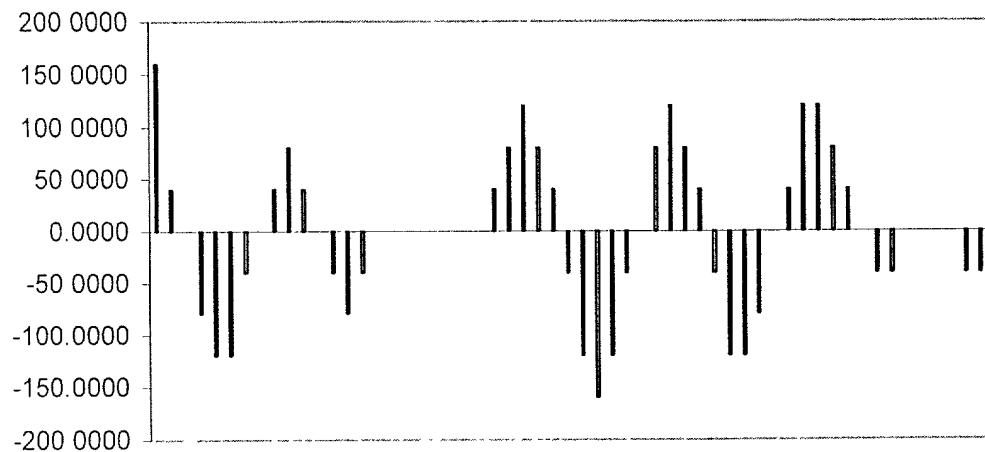


FIG 1. C

$$g(x) = c(n) \sqrt{\frac{2}{L}} \cos \sum_{k=0}^{n-1} x - 0.5 \frac{n \Sigma}{L} \approx \dots$$

where,

$$c(n) = \frac{1}{\sqrt{2}} \text{ for } n = 0$$

and,

$$c(n) = 1 \text{ for all } n \geq 0$$

FIG. 1D

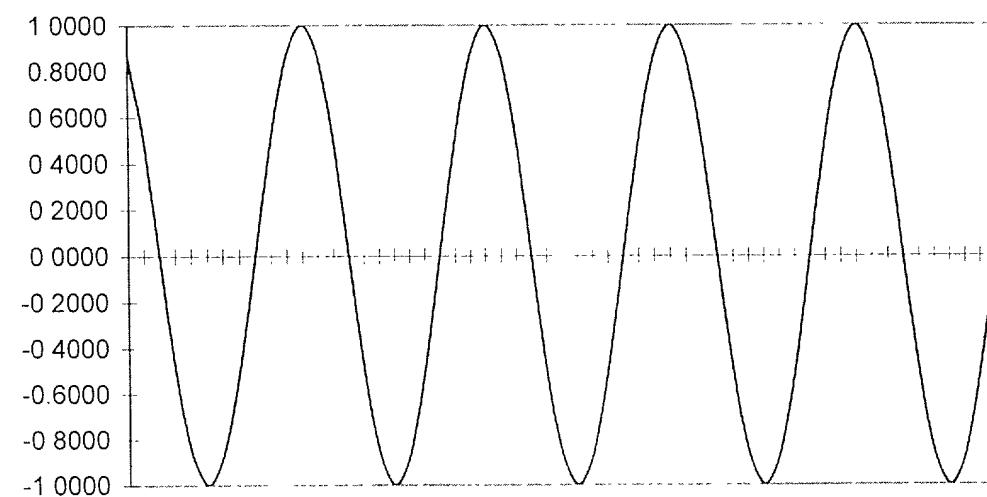
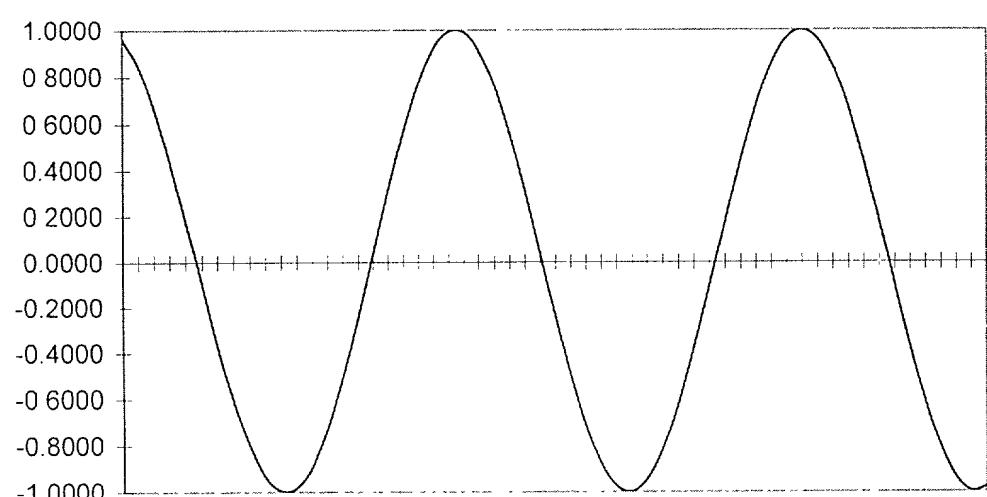
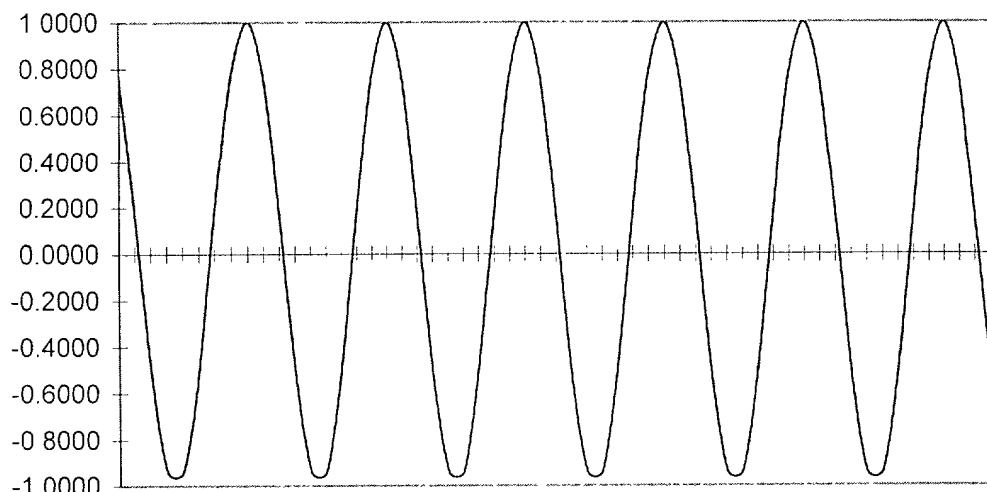


FIG. 1E

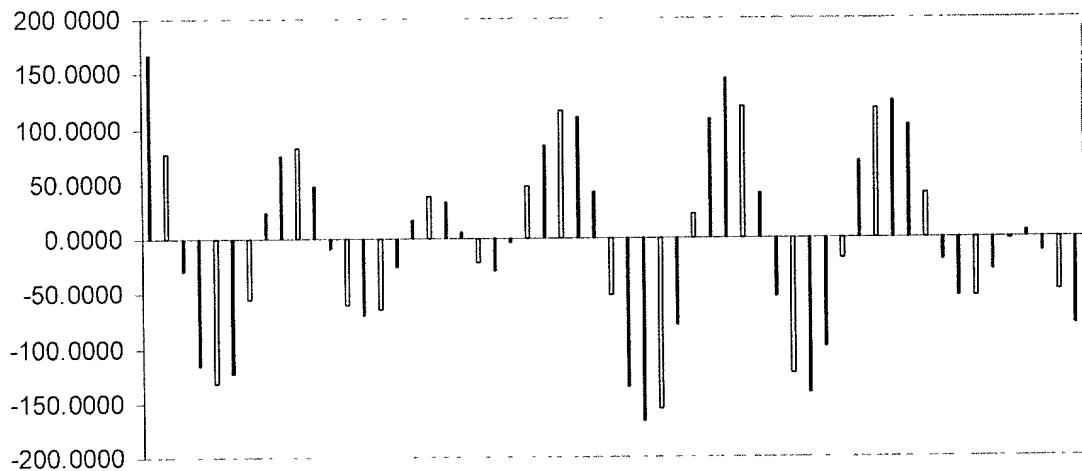


FIG 1. F

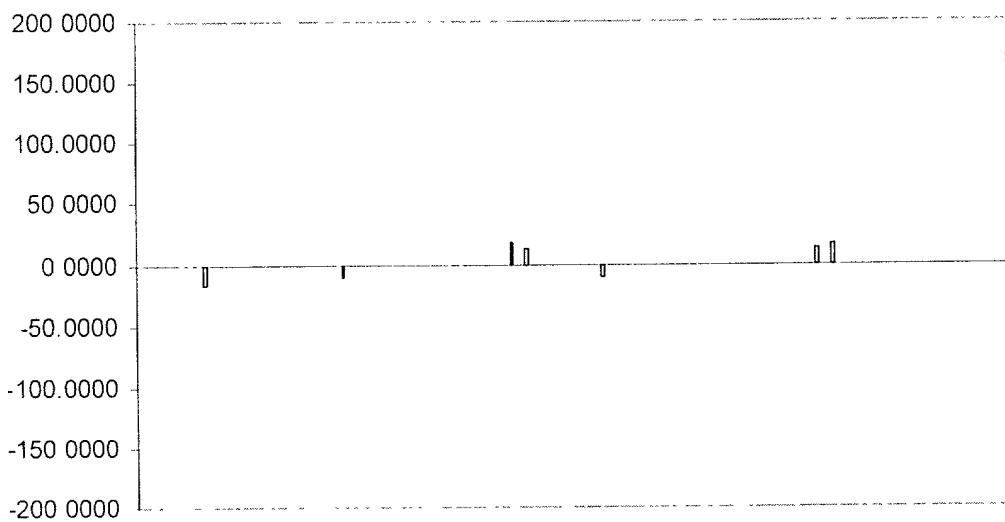


FIG 1. G

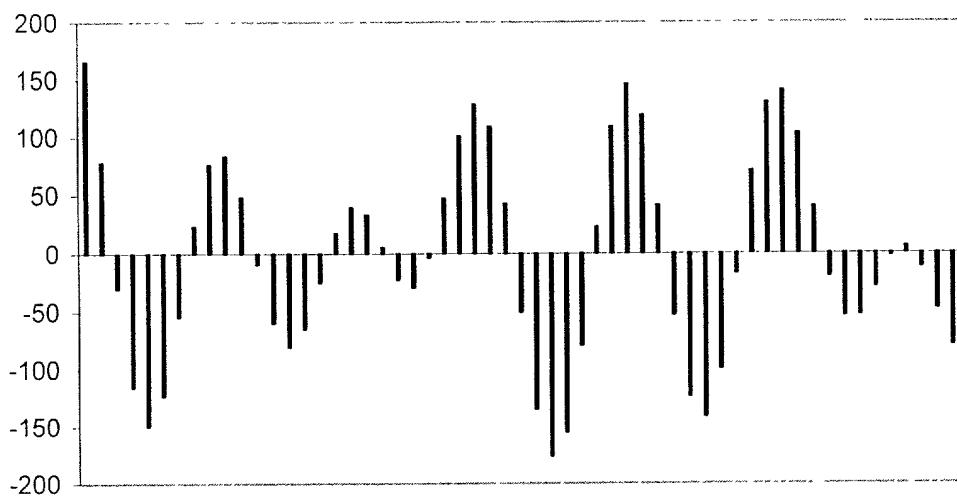


FIG 1. H

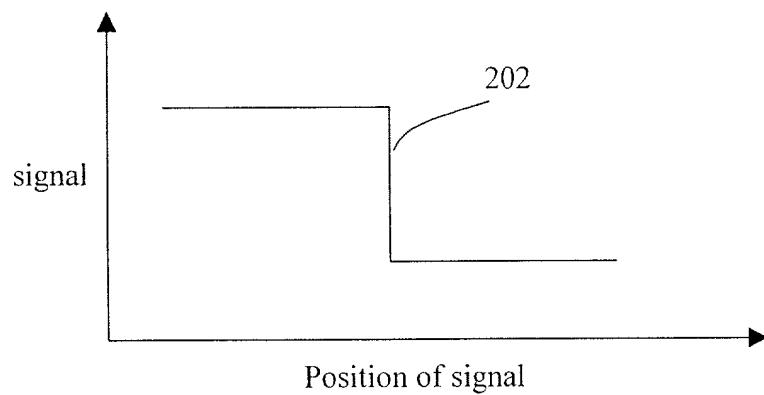


FIG. 2A

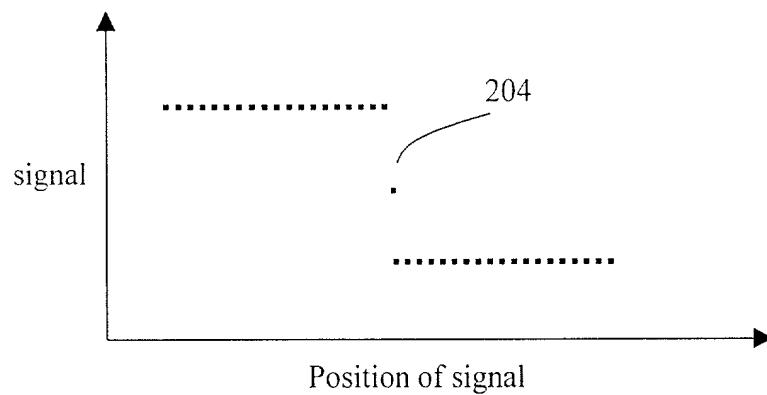


FIG. 2B

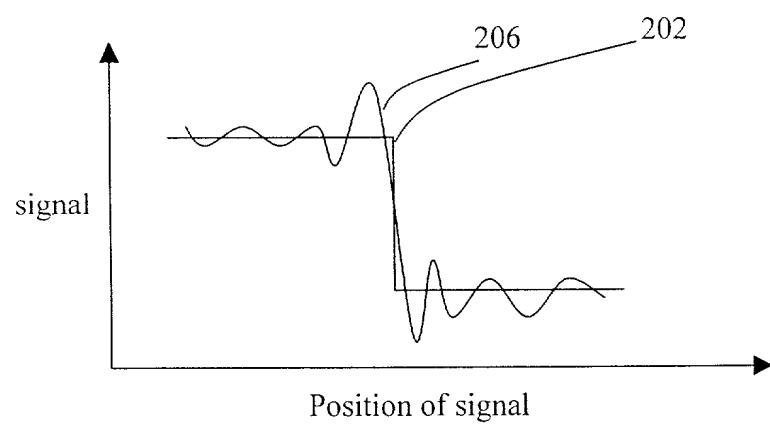


FIG.2C

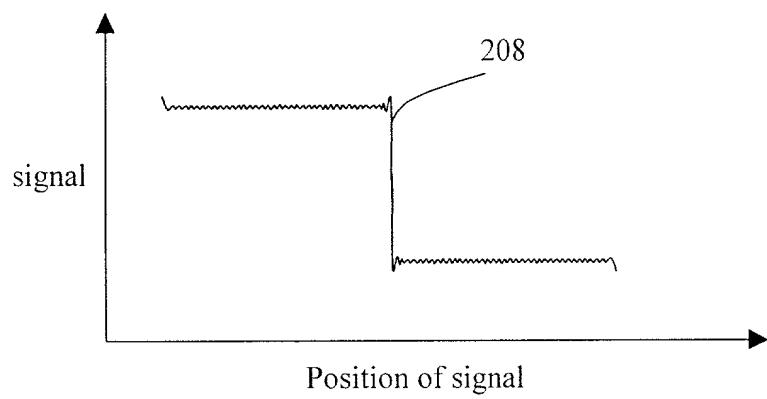


FIG.2D

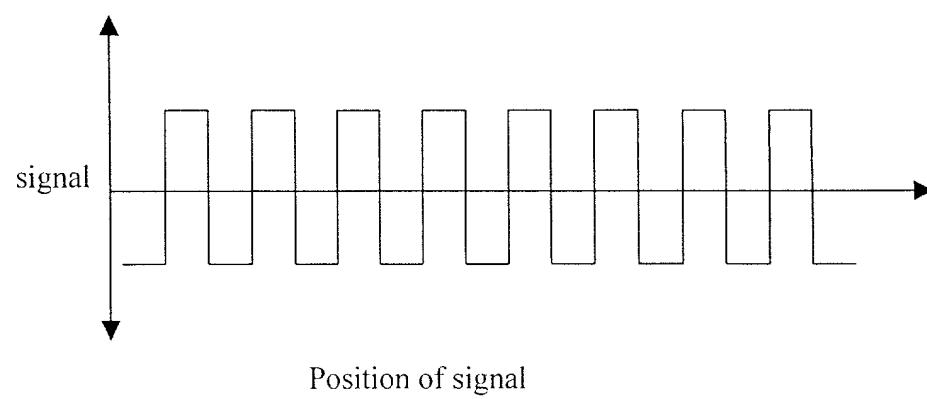
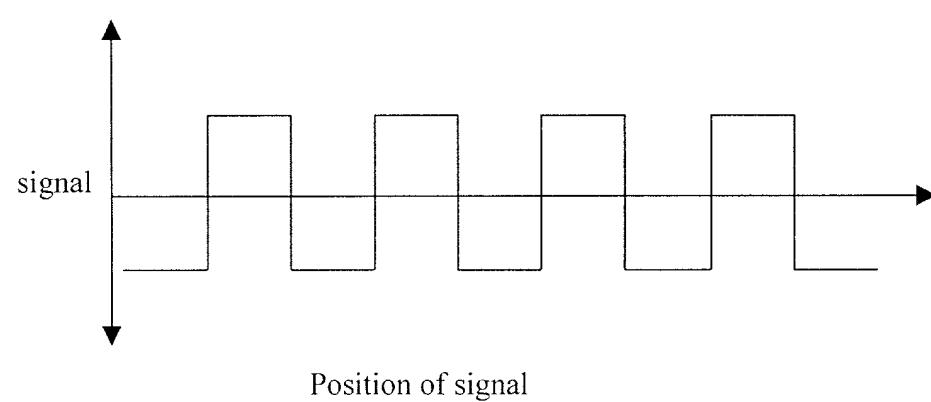
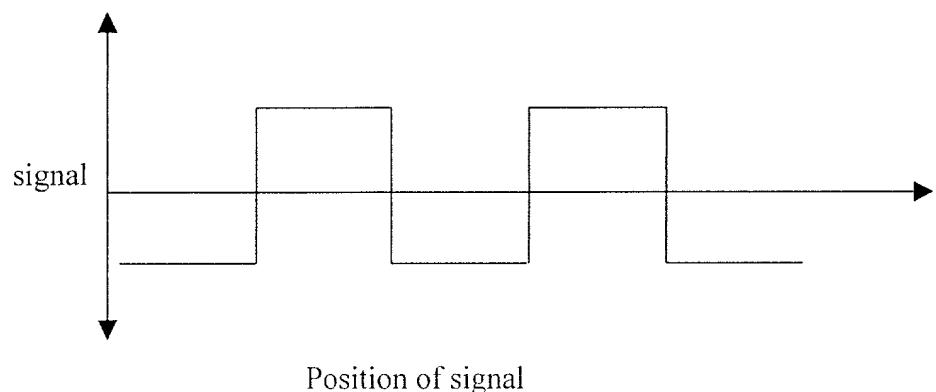


FIG.3

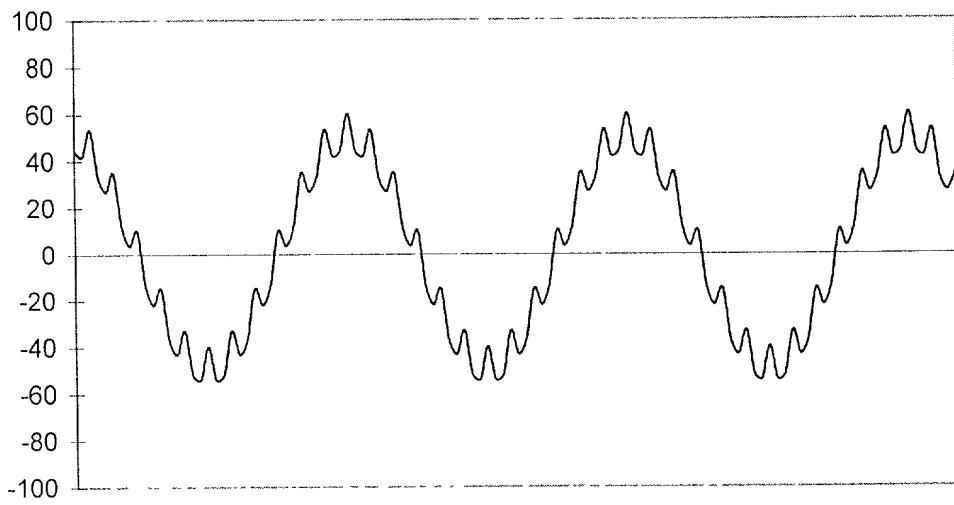


FIG.4A

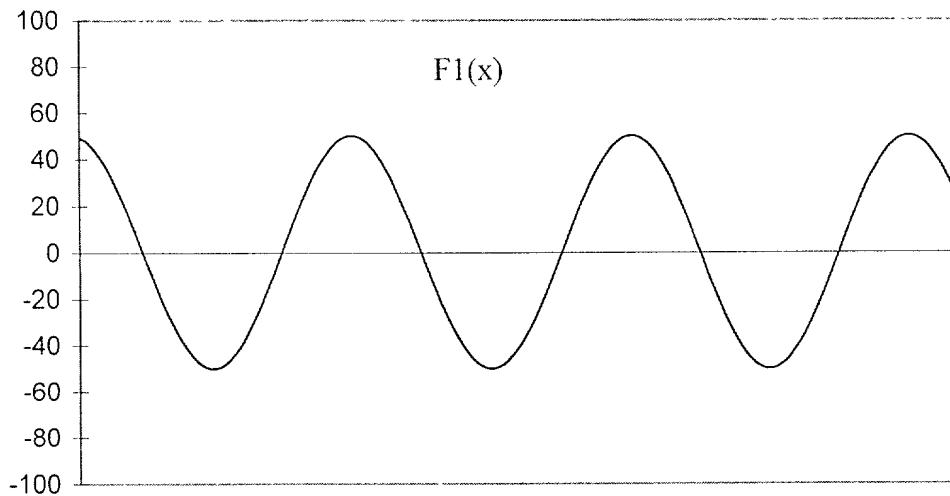


FIG.4B

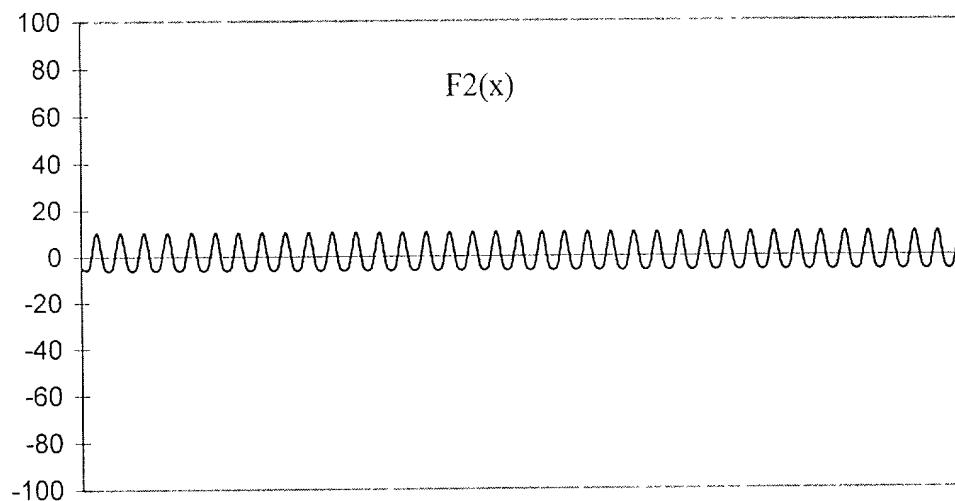


FIG.4C

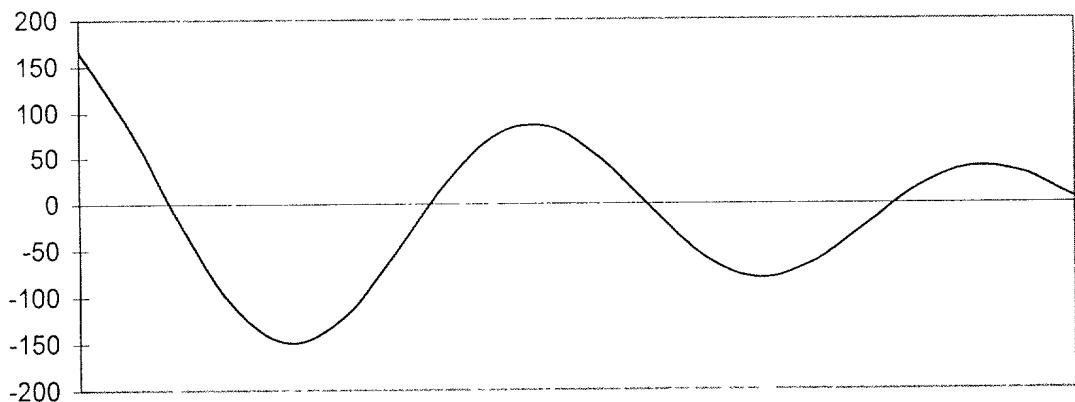


FIG.5A

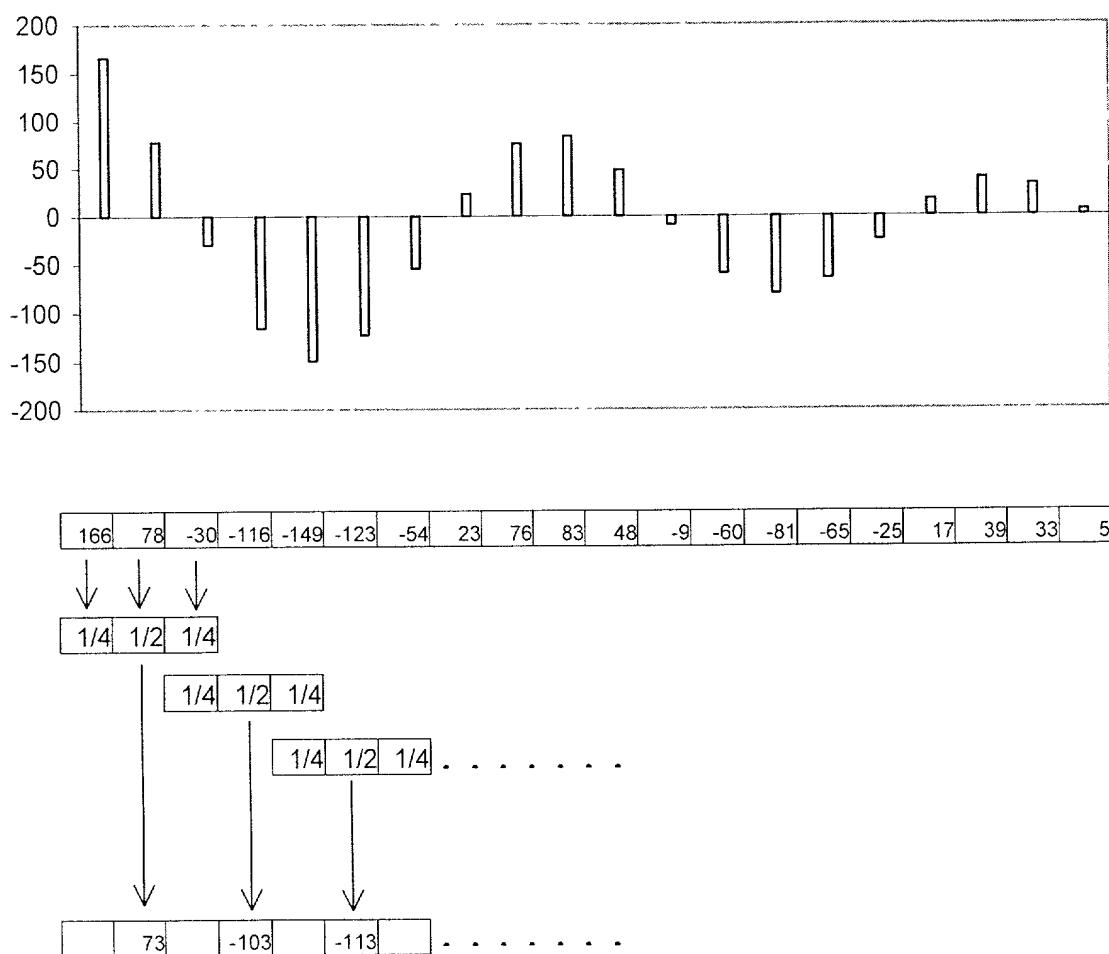
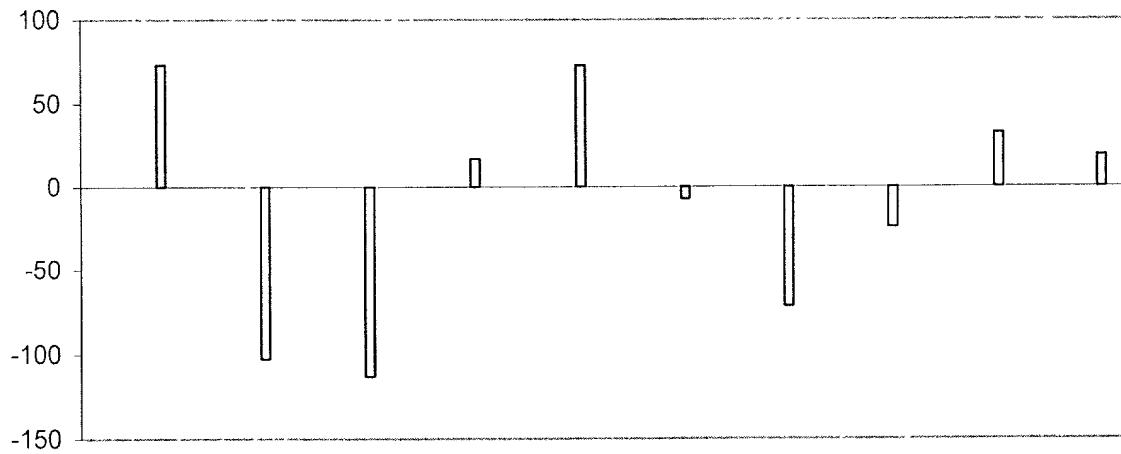


FIG.5B



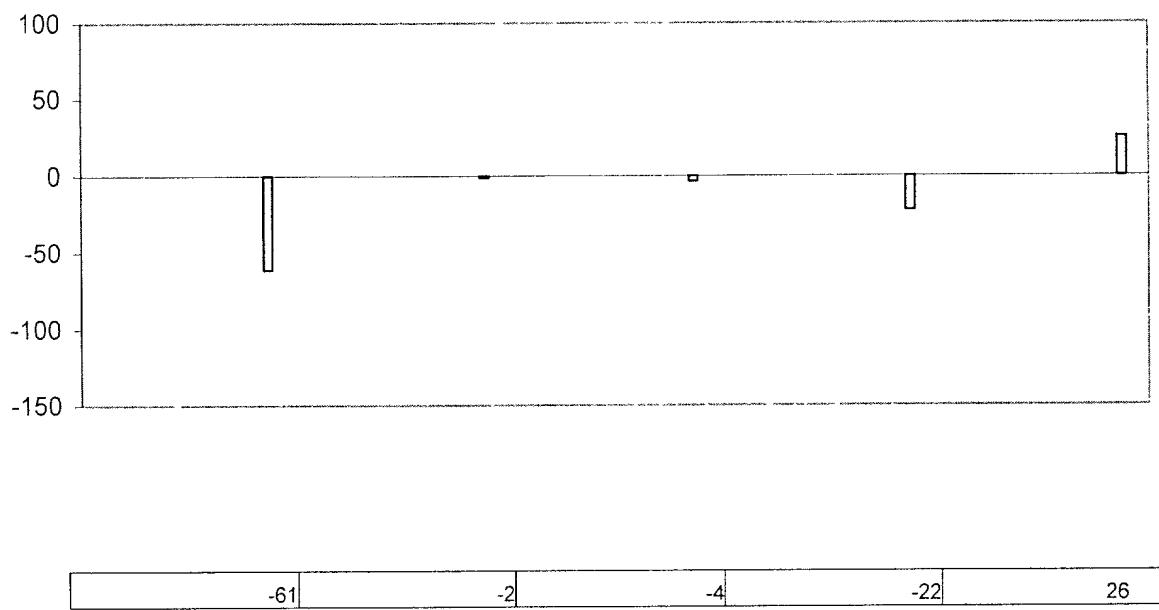


FIG.5D

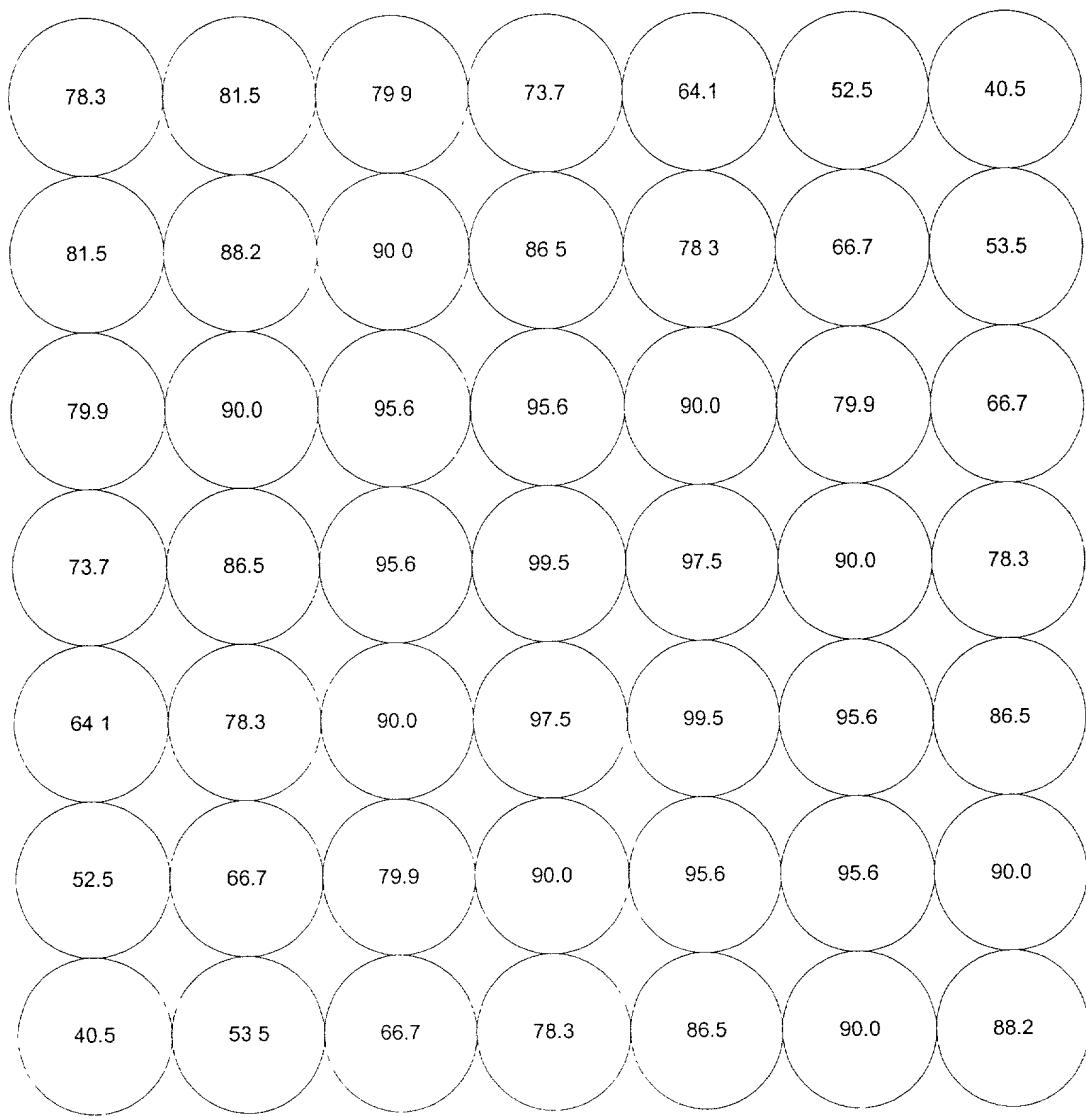


FIG. 6A

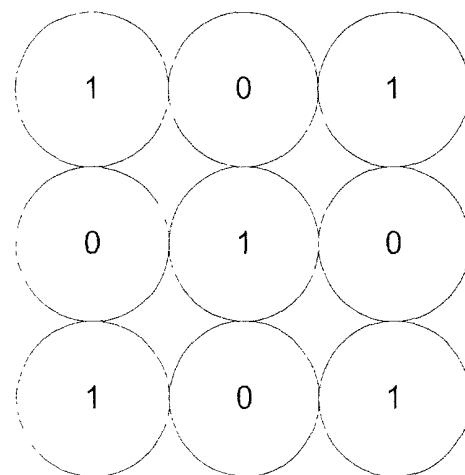
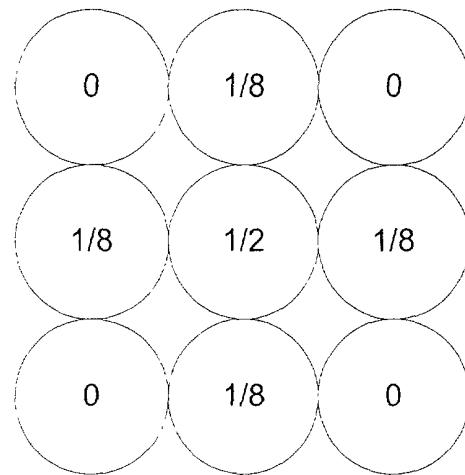


FIG. 6B

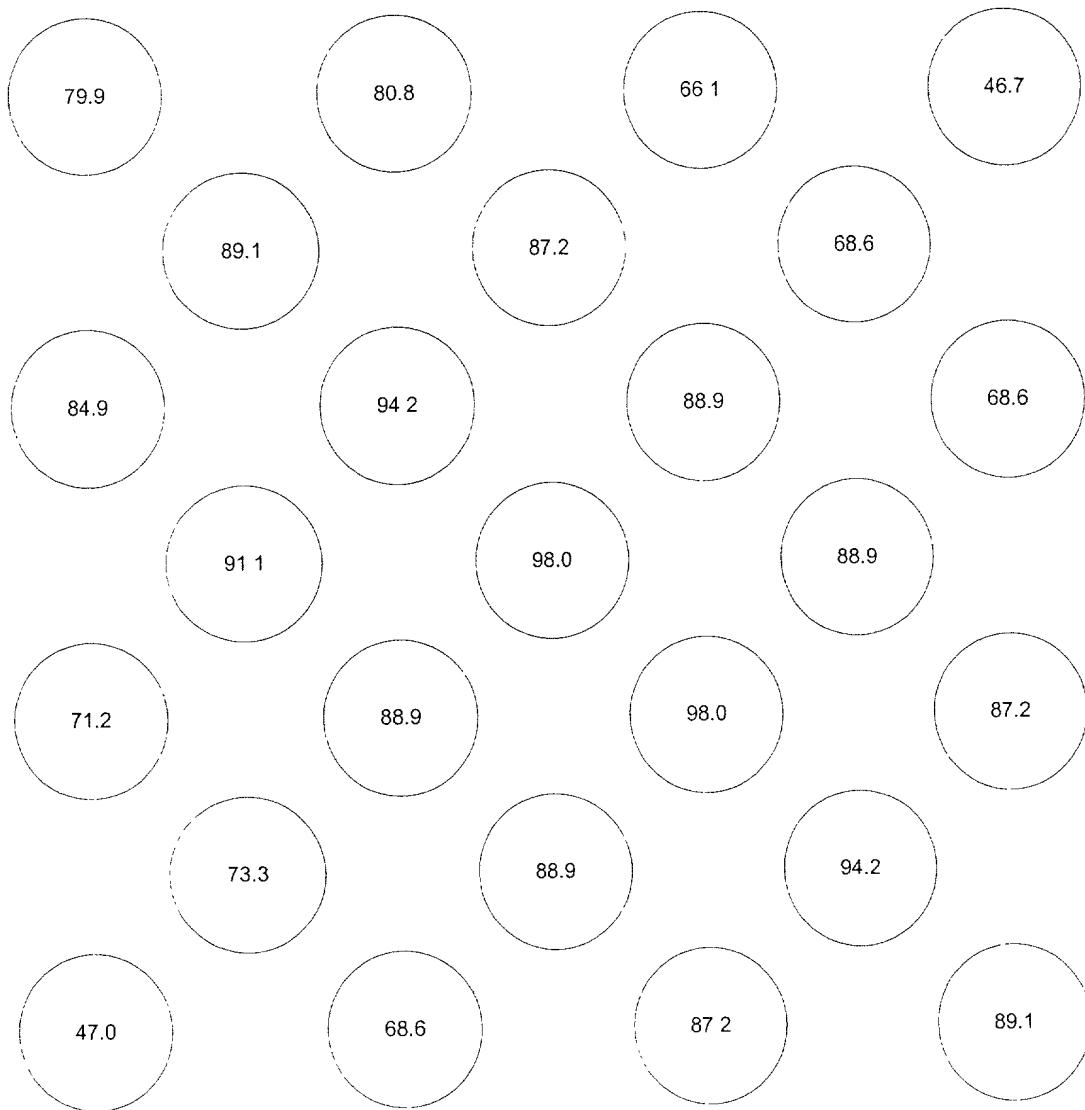
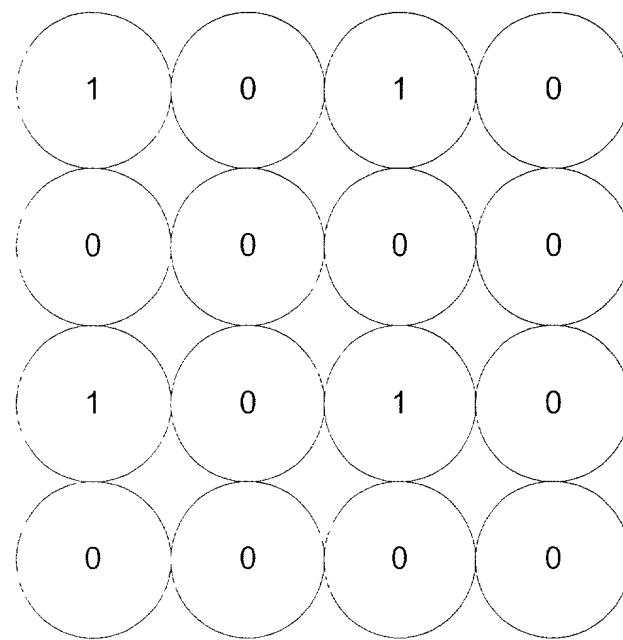


FIG. 6C



FIG. 6D



1 0 1 0 1 0 1 0 1 0 1 0 1 0 1 0

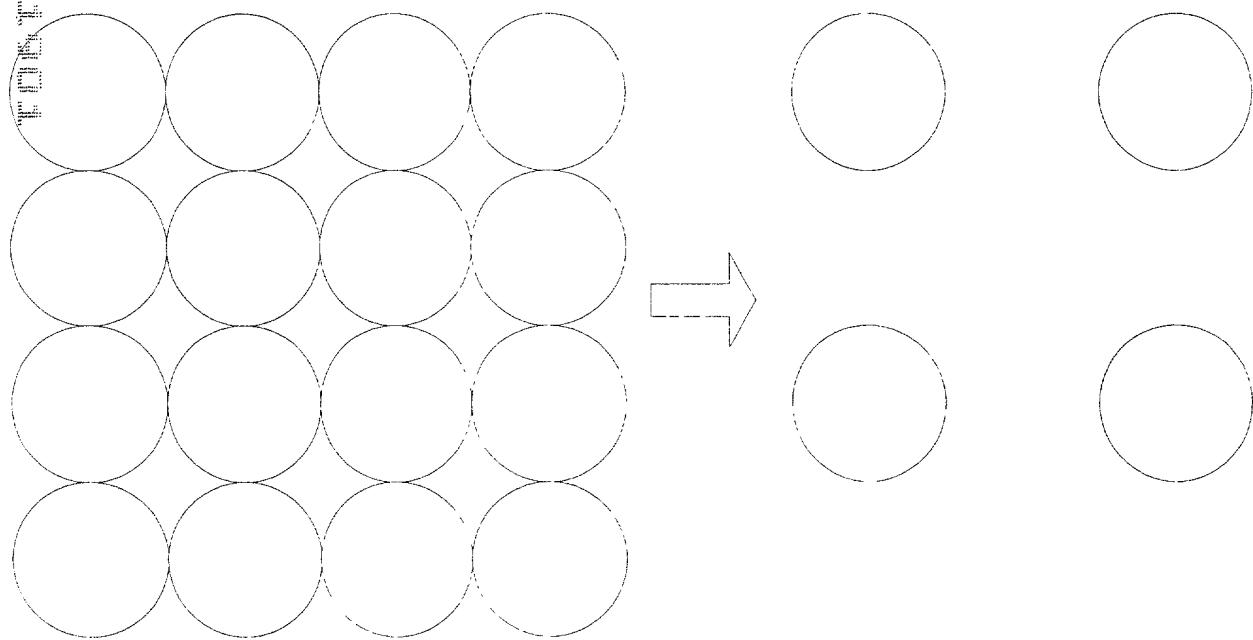


FIG. 6E

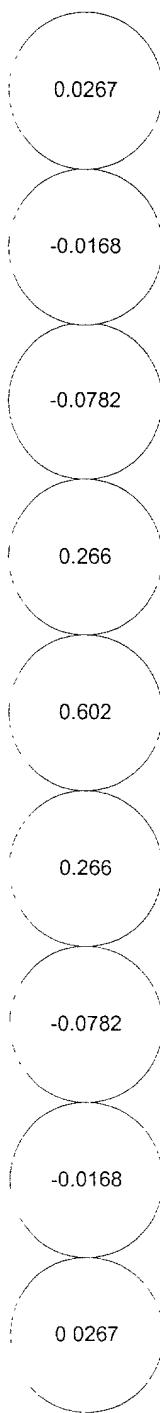
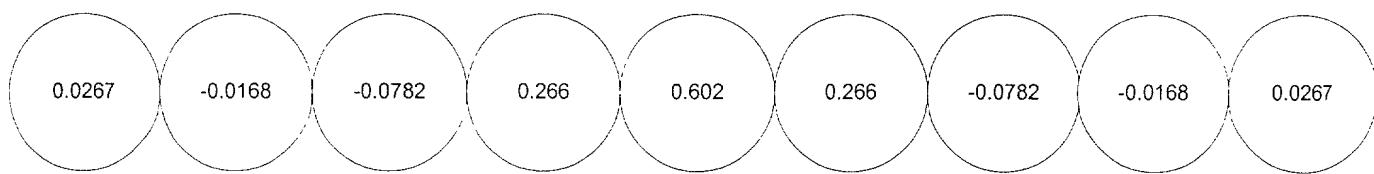


FIG. 6F

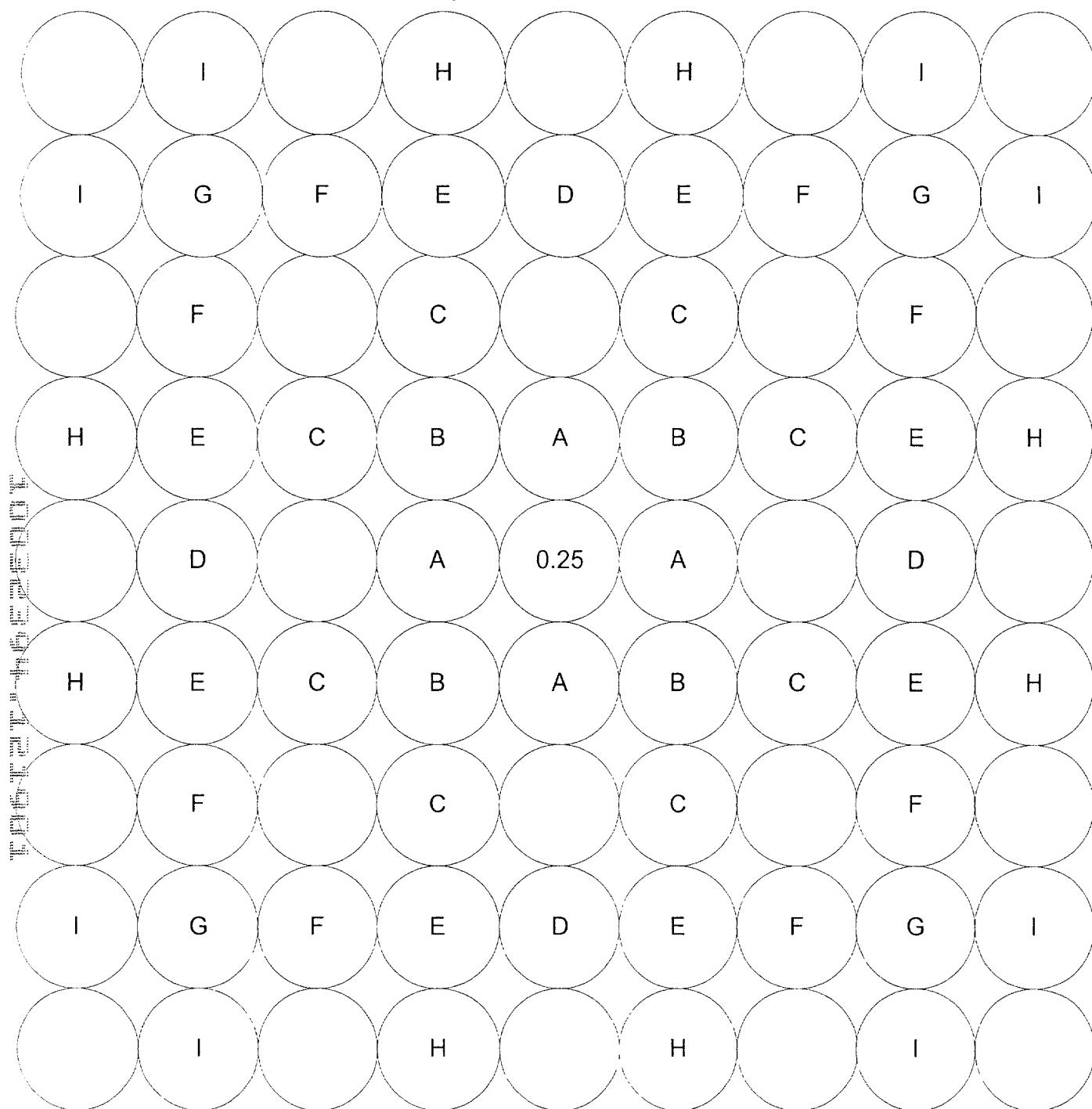


FIG. 6G

A = 0.1609
B = 0.0712
C = - 0.0208
D = - 0.0101
E = - 0.0045
F = 0.0013
G = 0.00028
H = 0.00713
I = - 0.00045

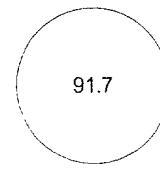
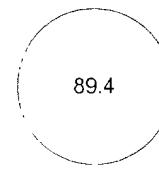
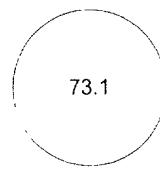
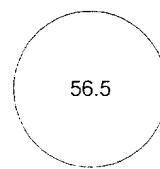
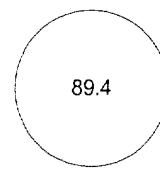
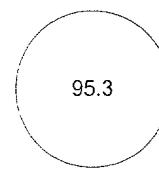
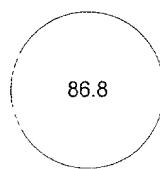
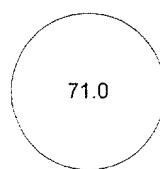
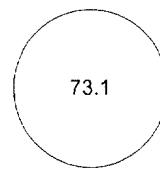
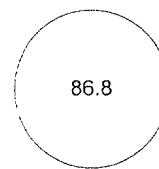
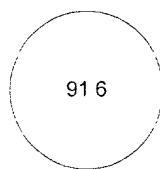
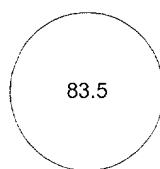
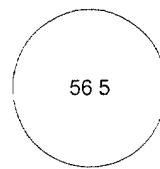
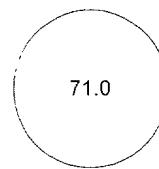
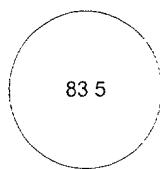
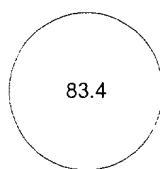


FIG. 7A

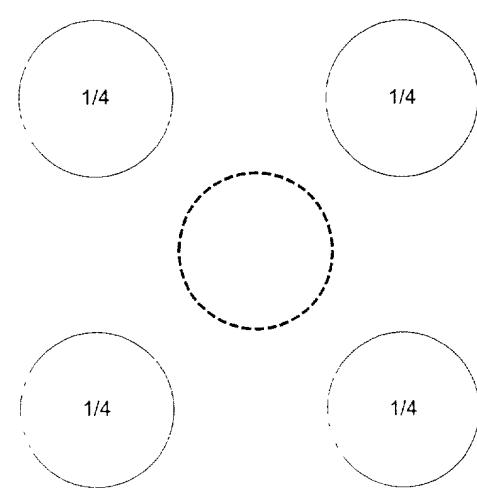


FIG. 7 B

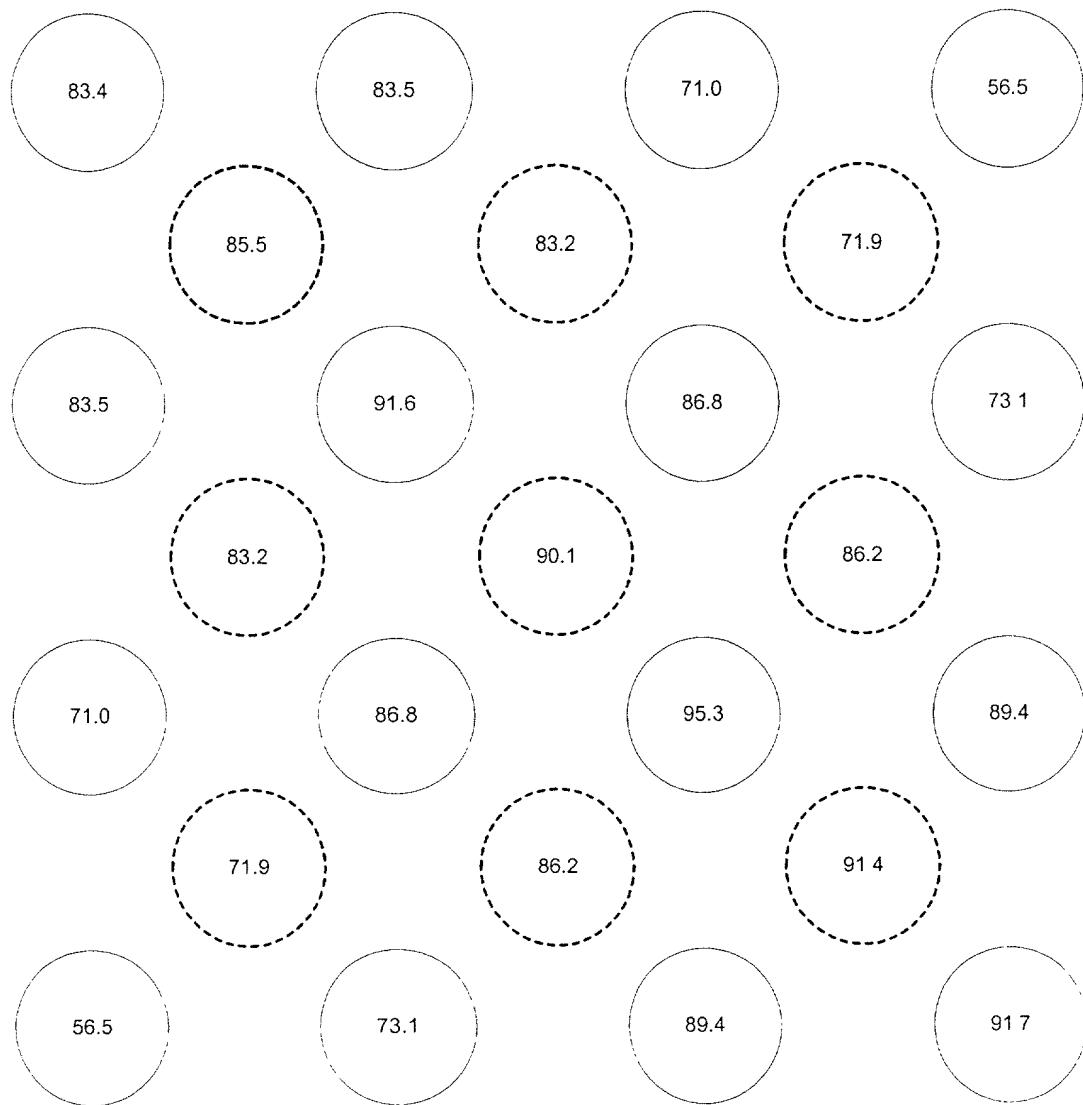


FIG. 7C

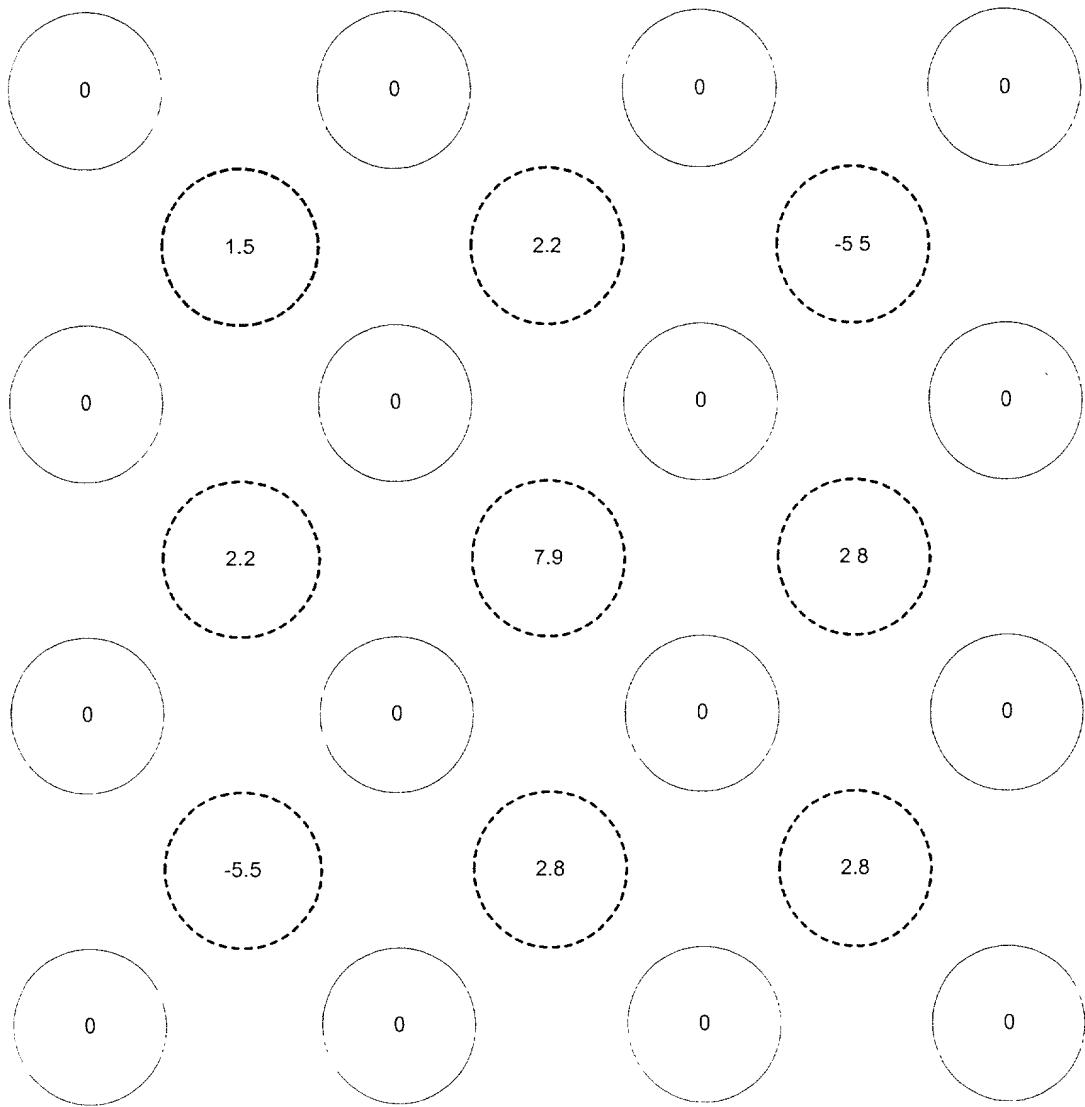


FIG. 7D

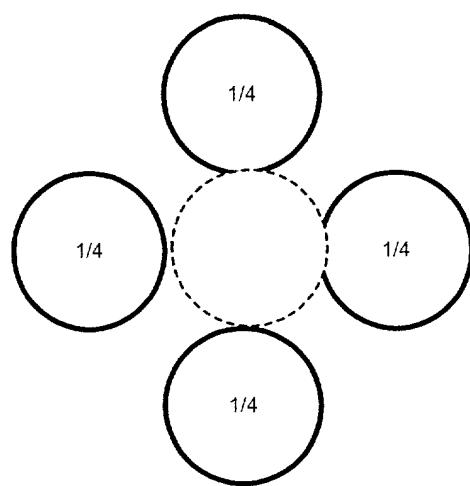


FIG. 7E

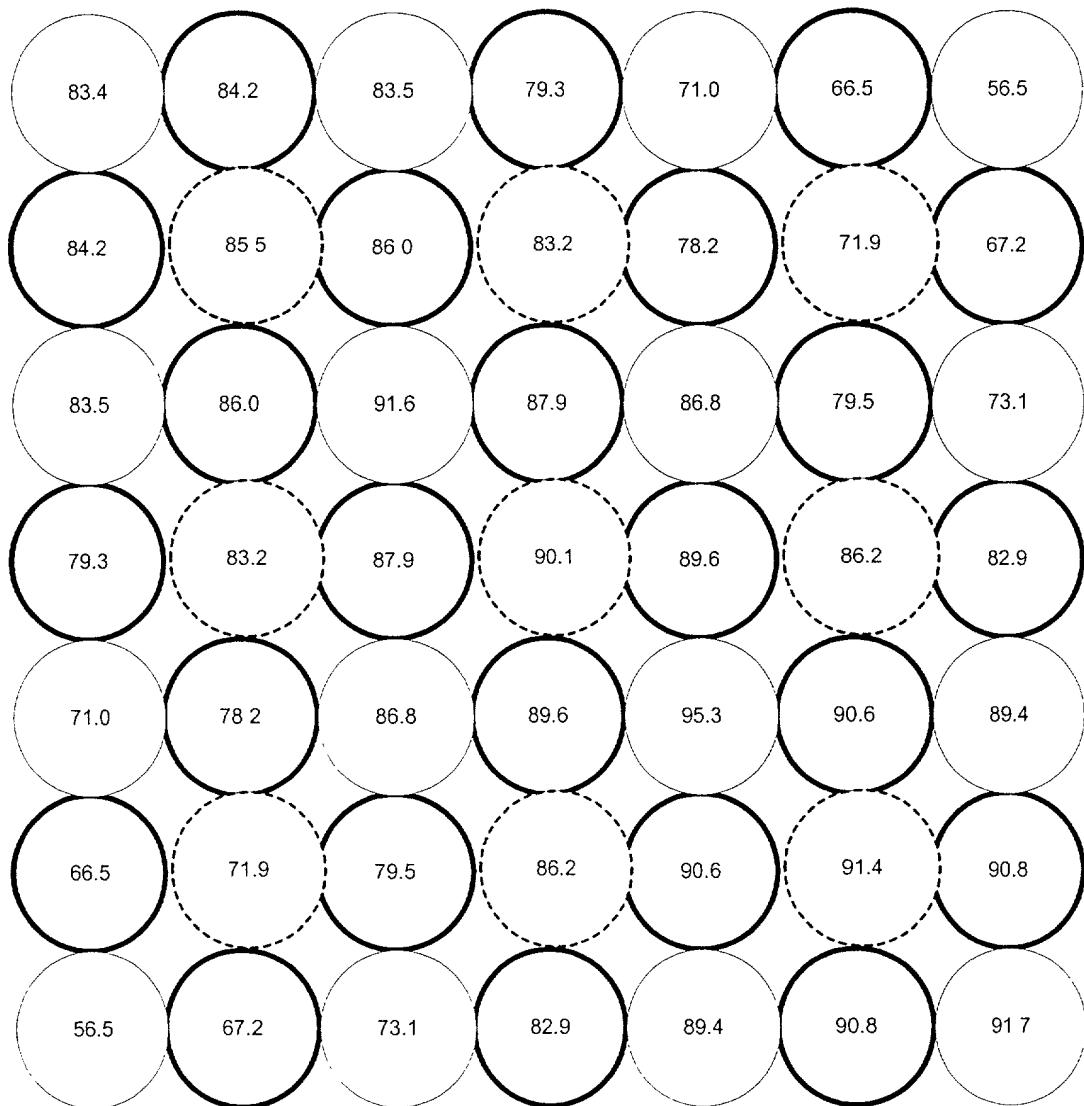


FIG. 7F

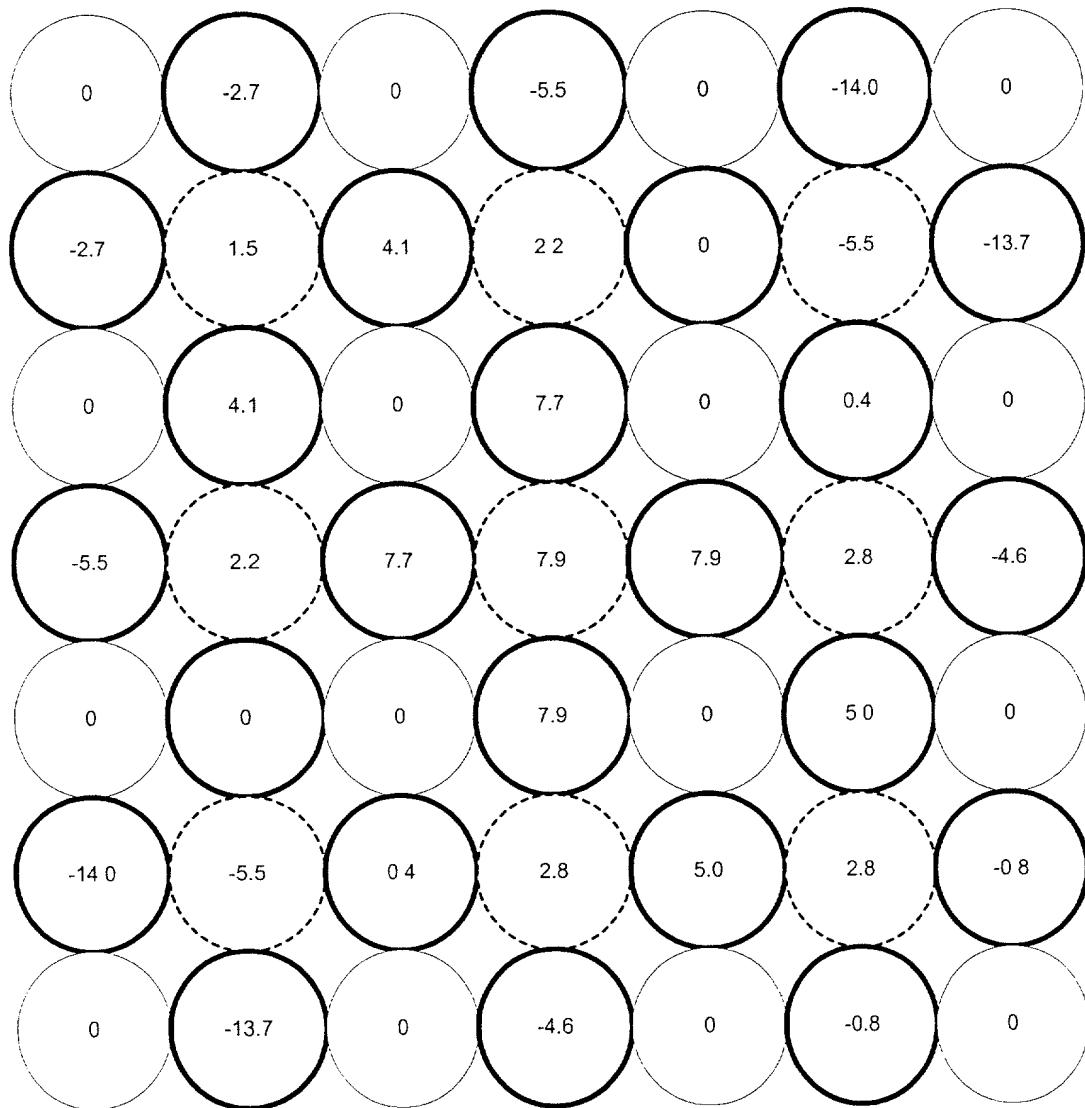


FIG. 7G

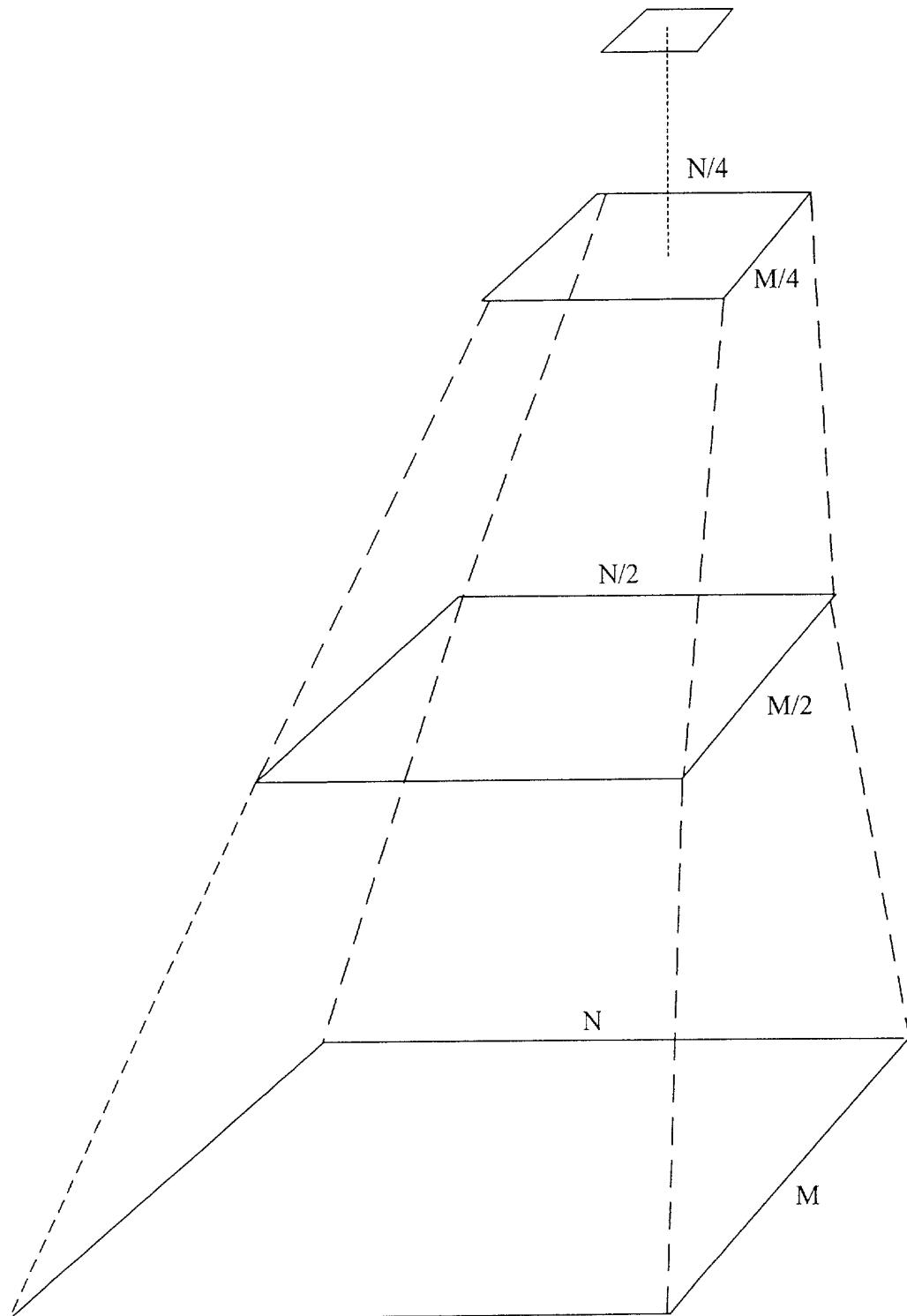


FIG. 8

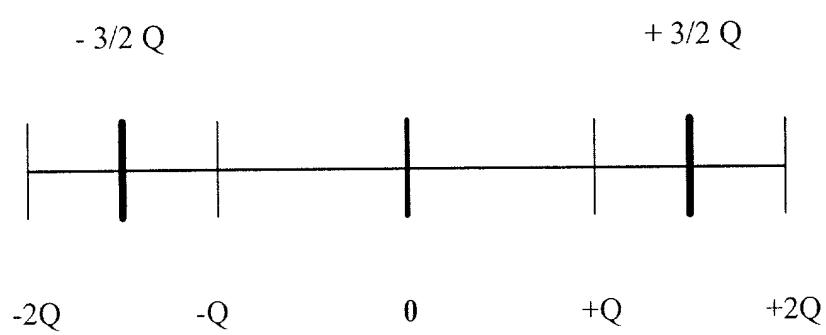


FIG. 9A

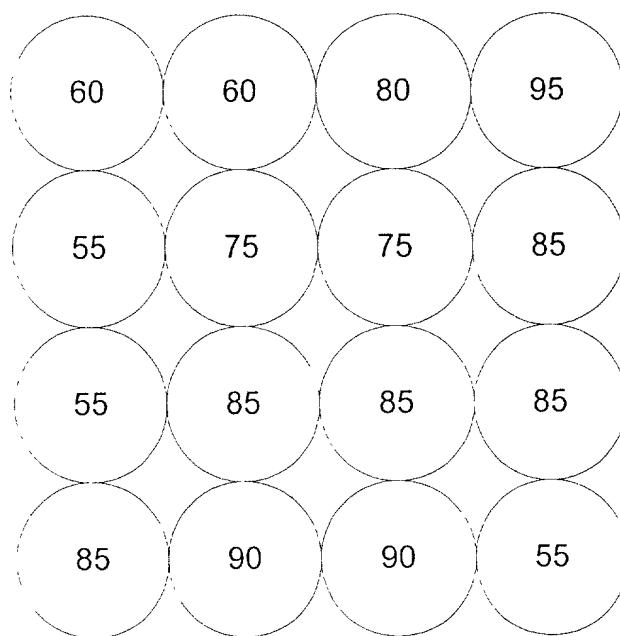
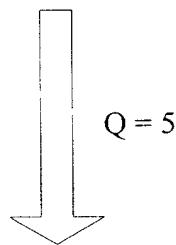
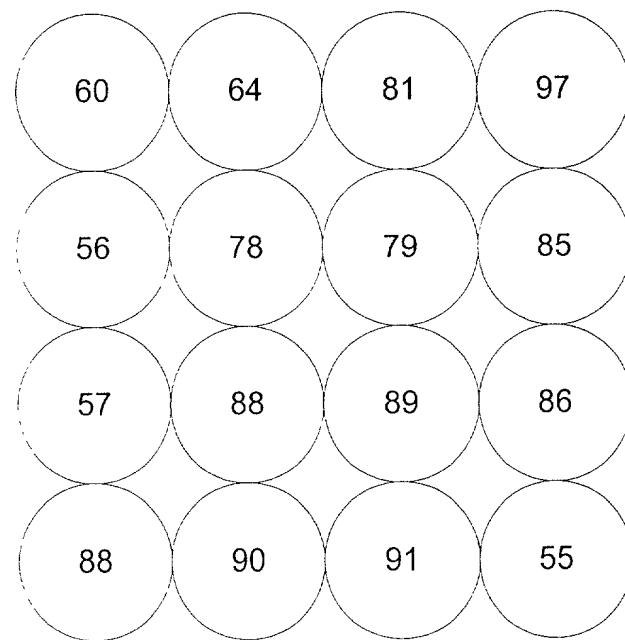


FIG. 9B

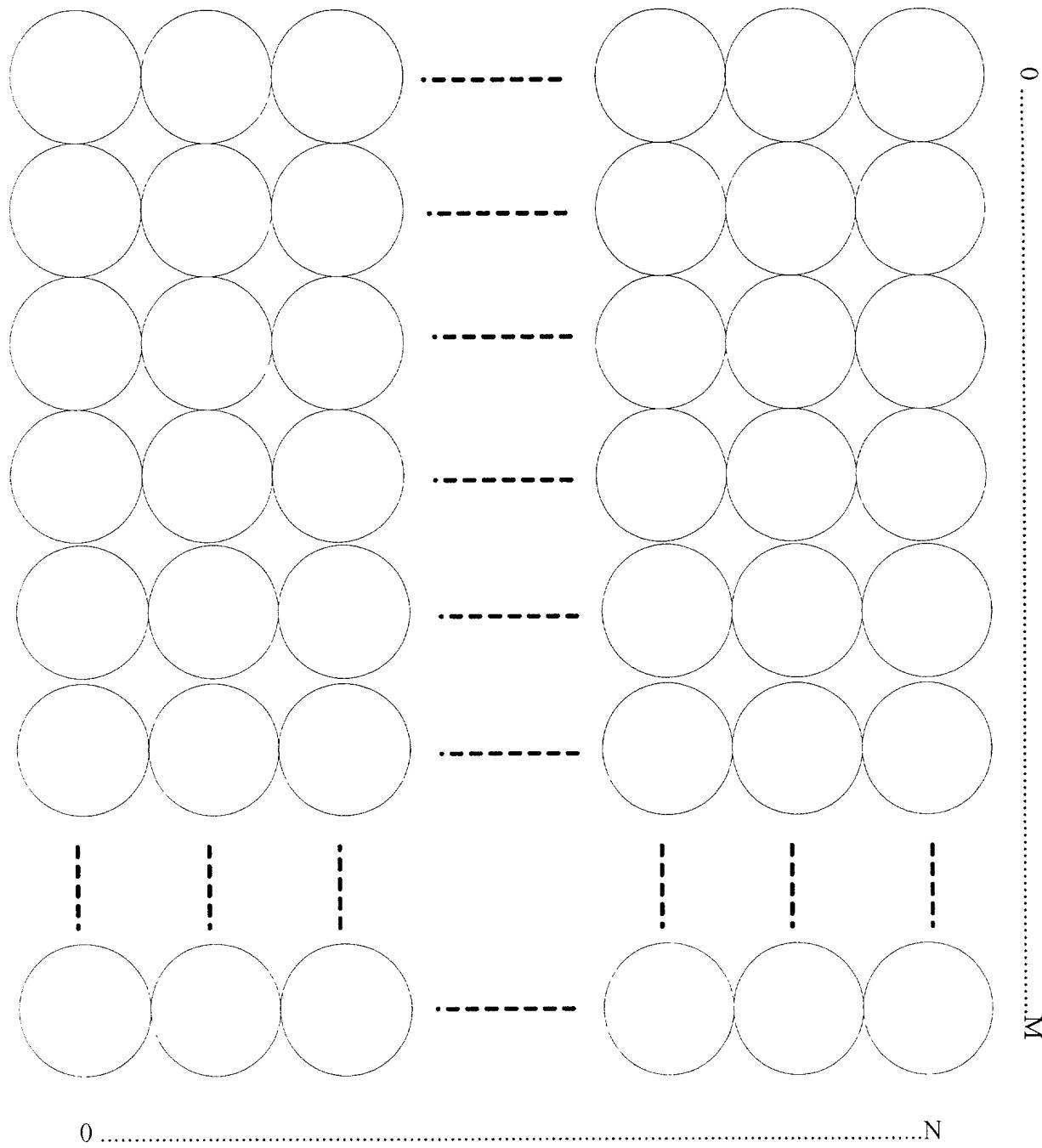
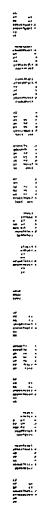


FIG. 10A

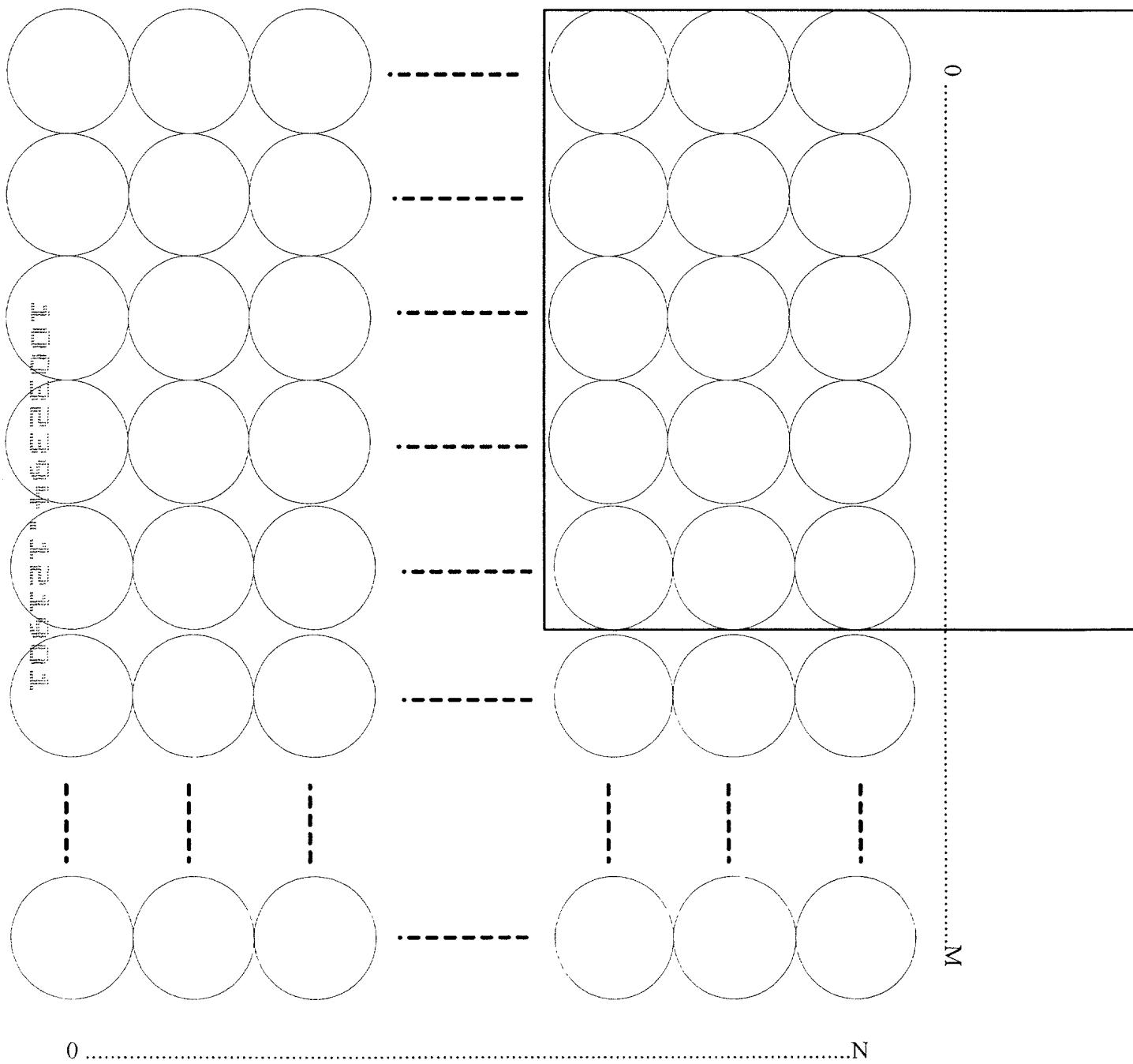


FIG. 10B

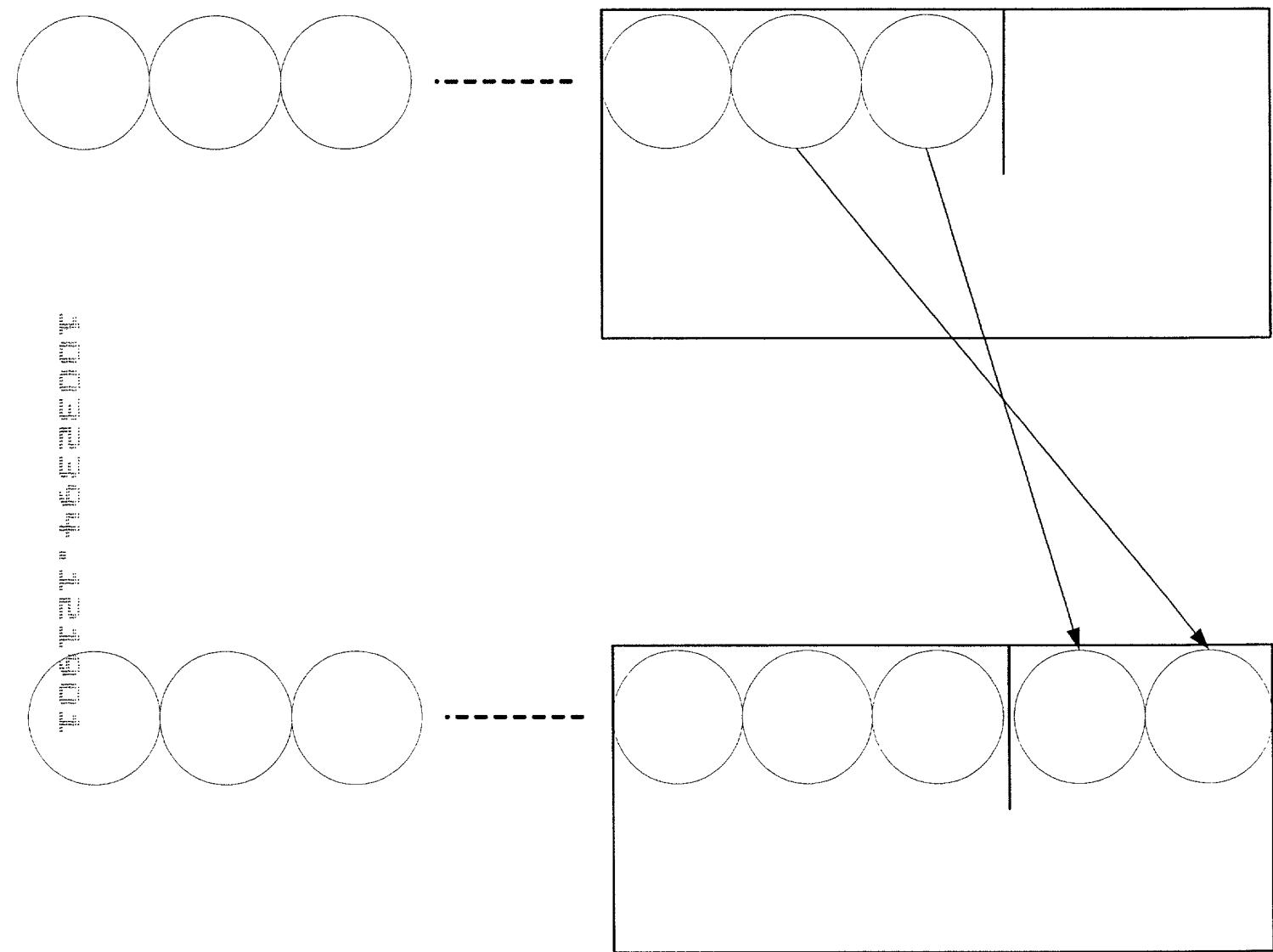


FIG. 10C

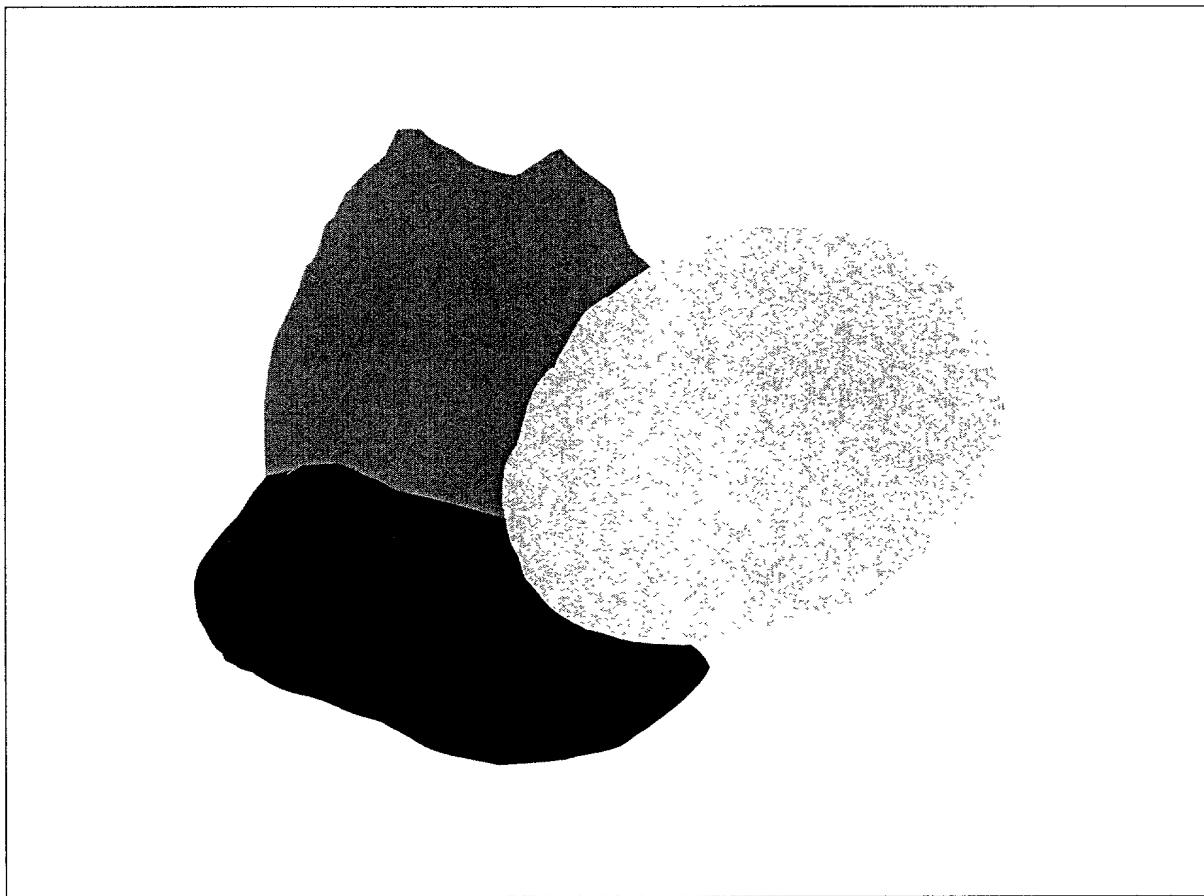


FIG. 11

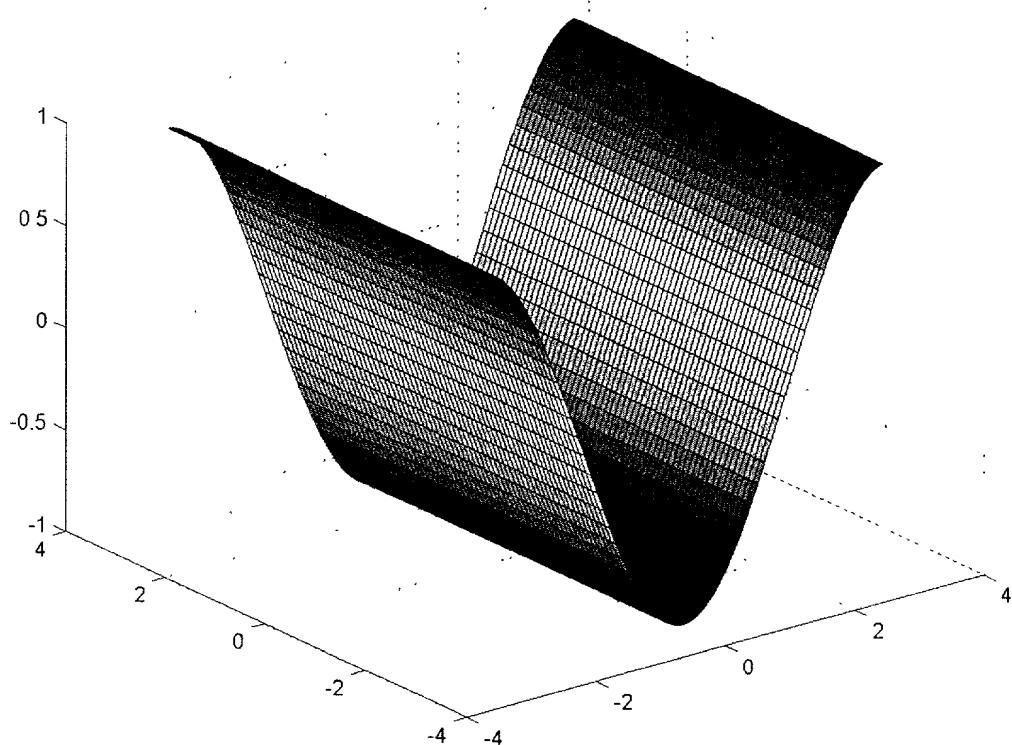


FIG. 12A

10006.000610

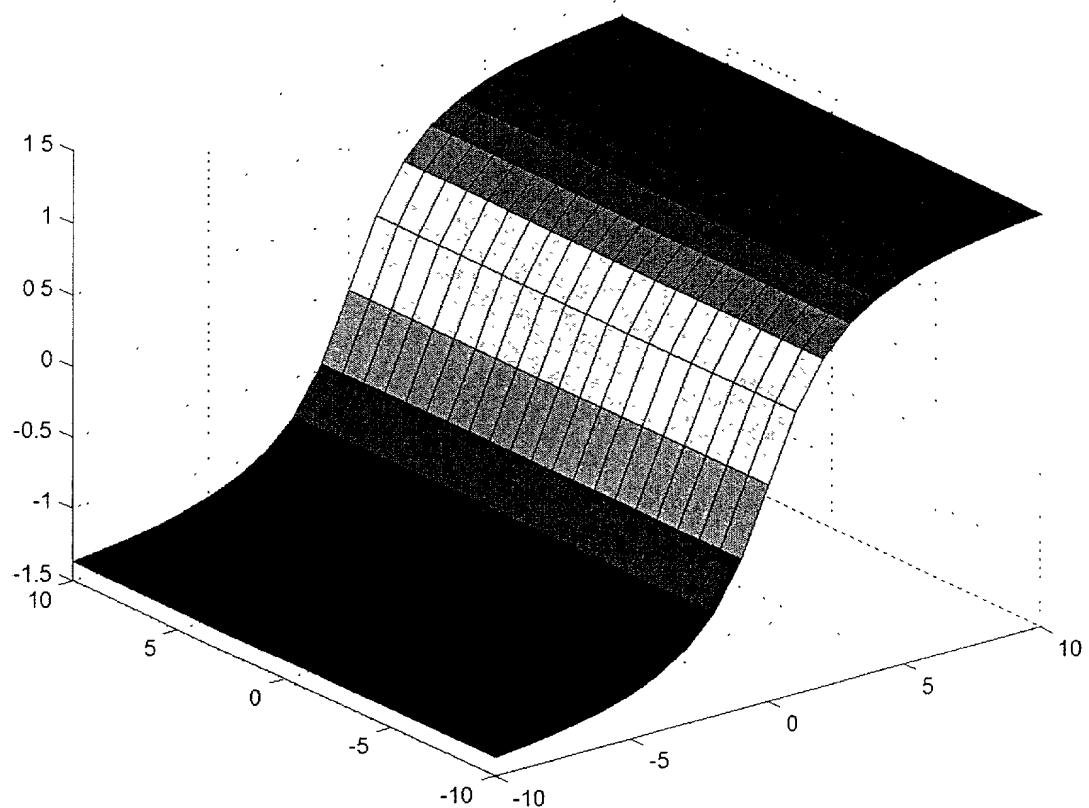


FIG. 12B

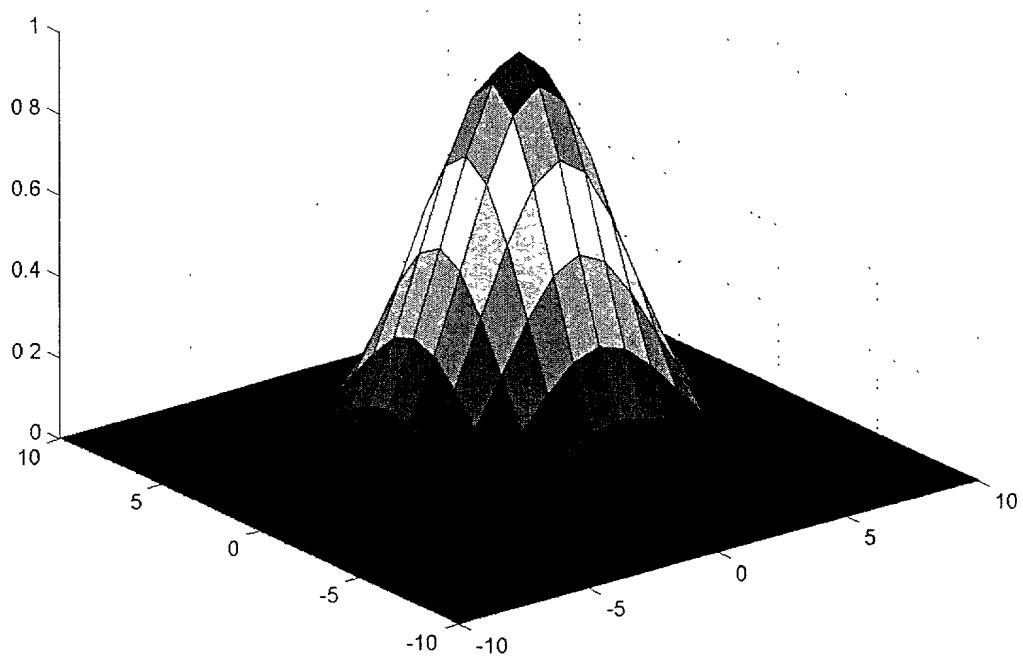


FIG. 12C

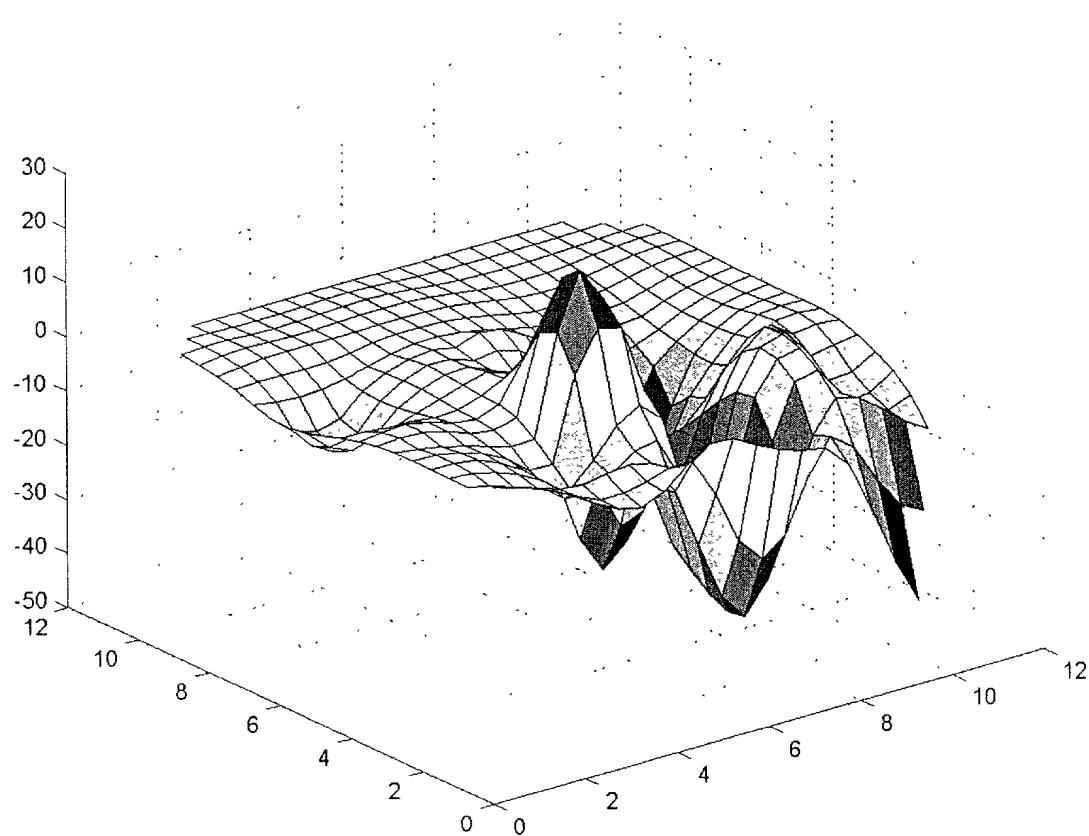


FIG. 12D

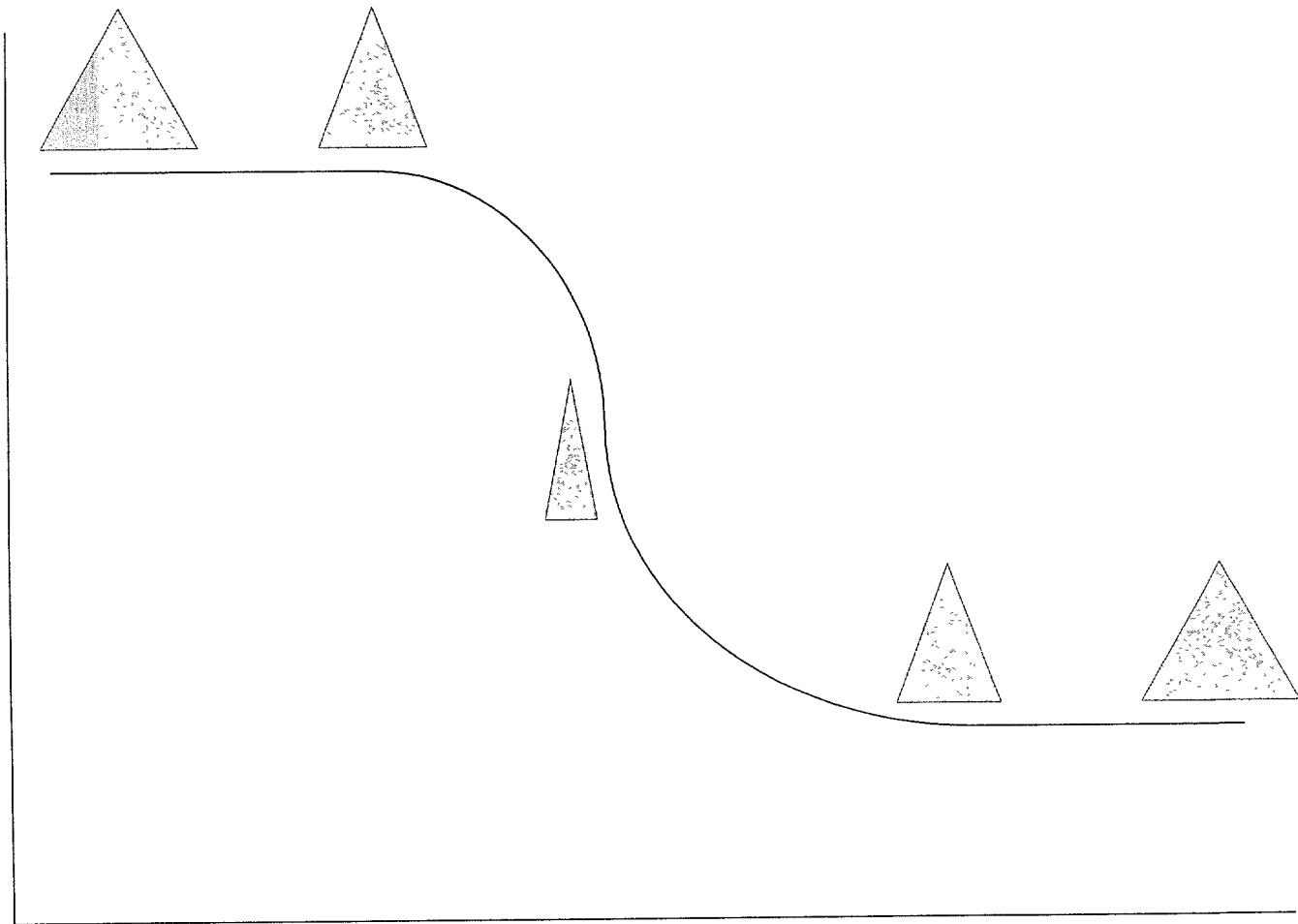


FIG. 13

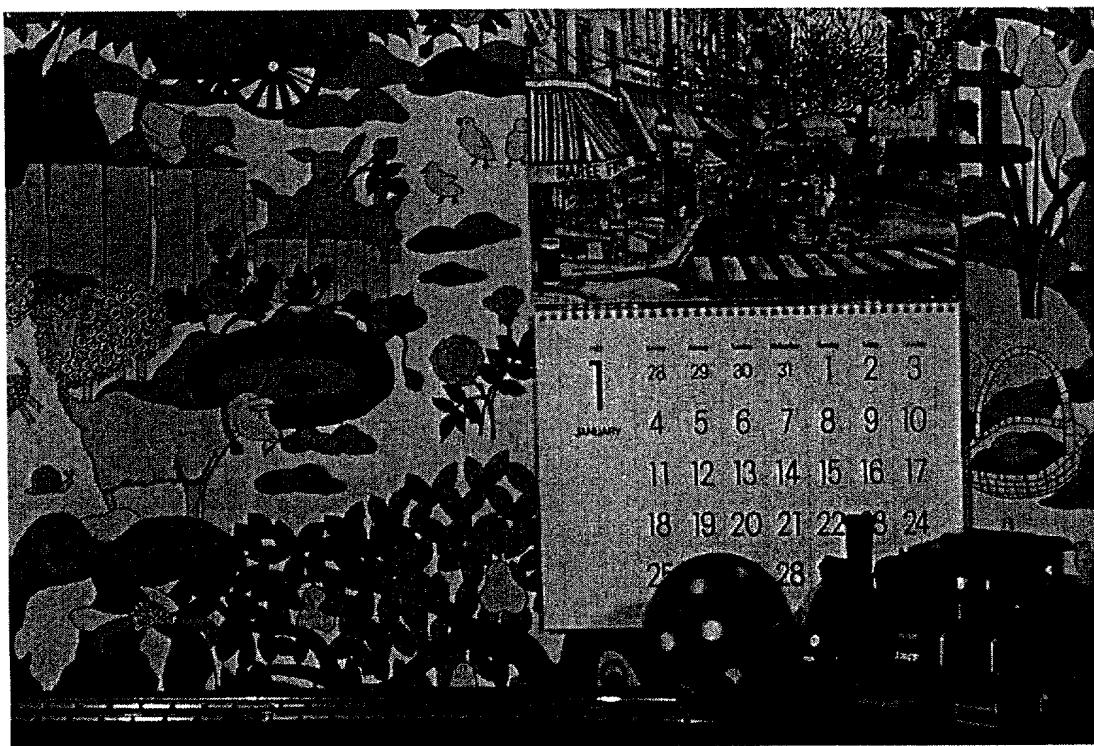


FIG. 14 A



FIG. 14 B

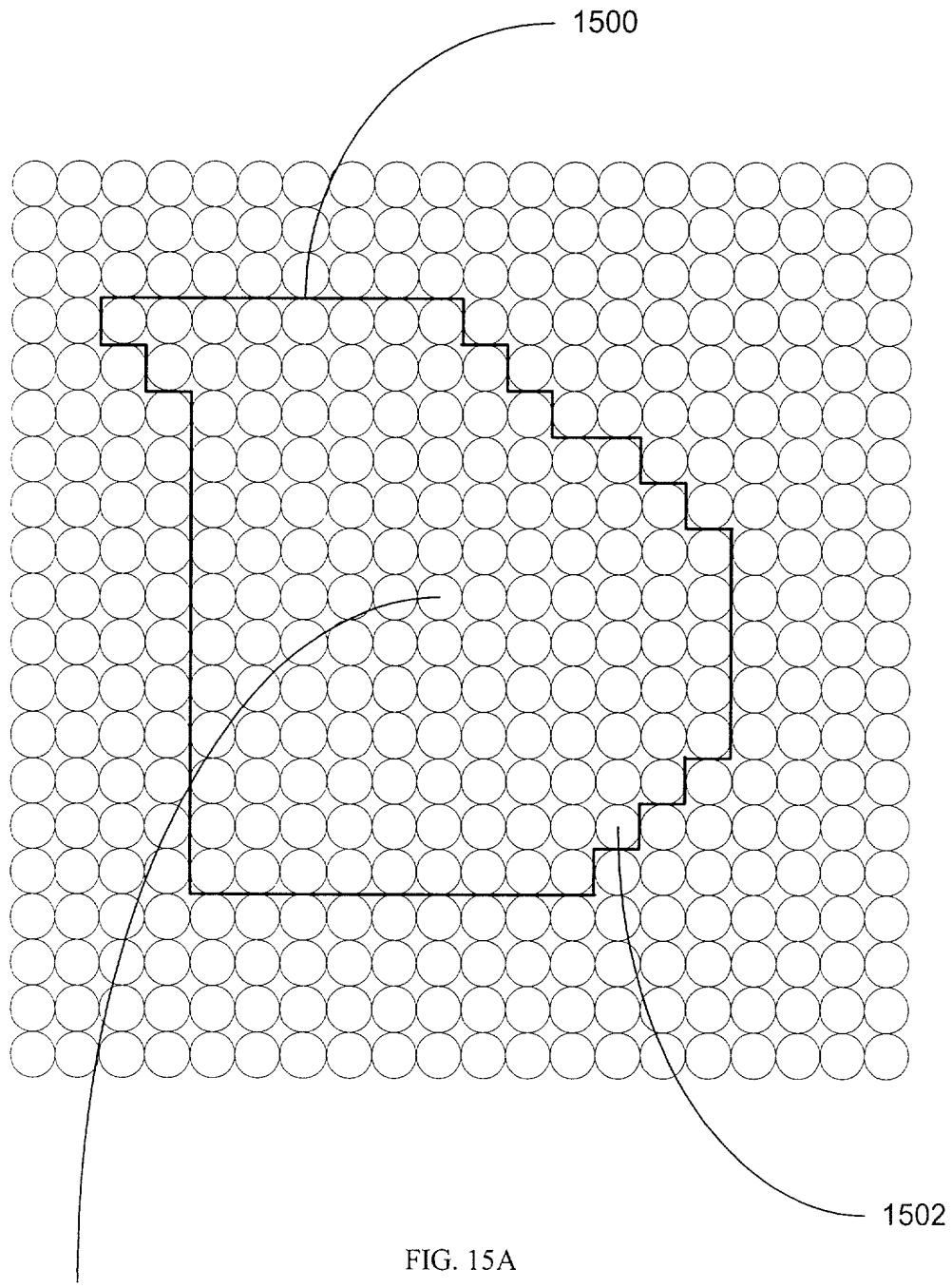
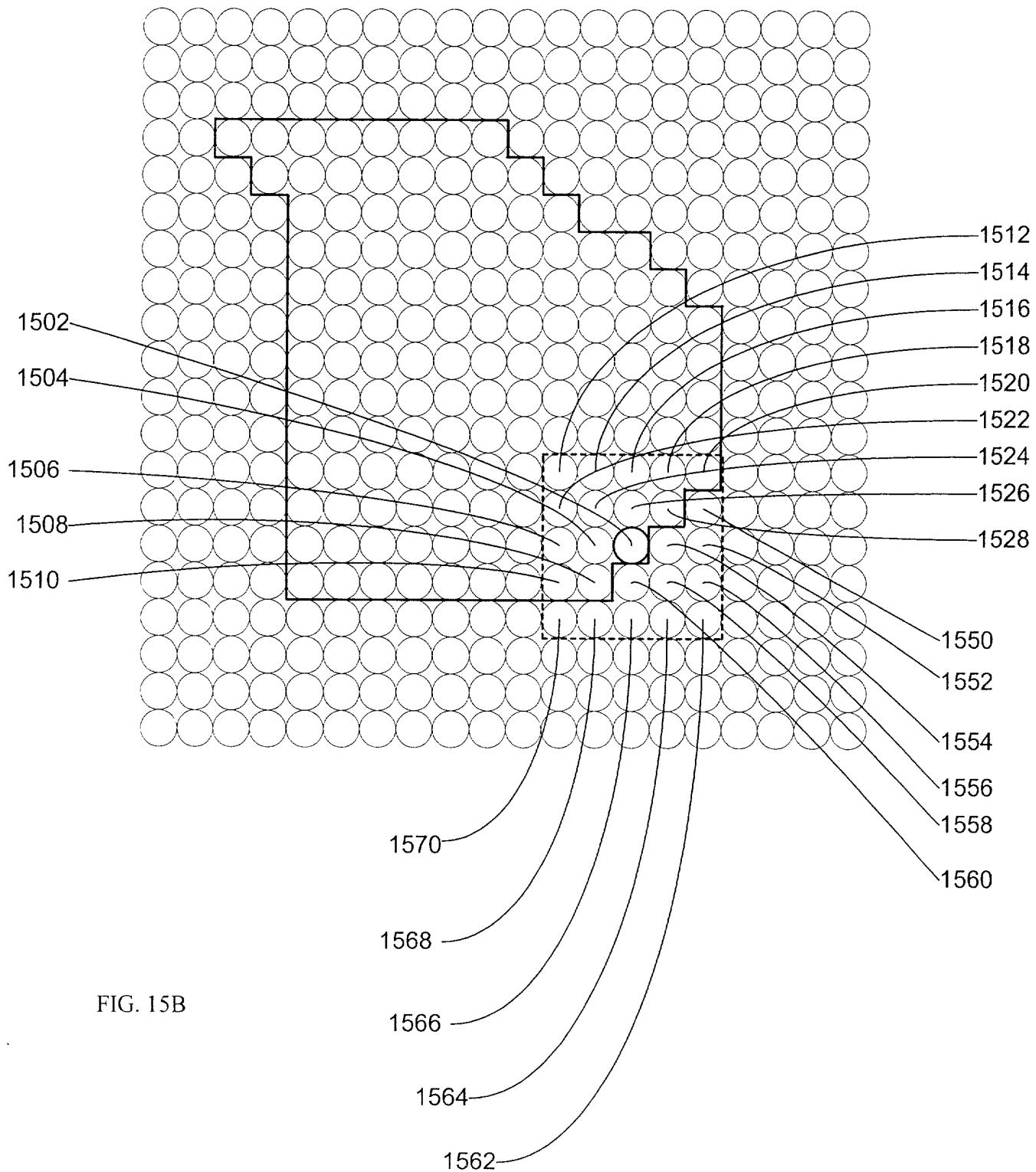


FIG. 15A

1598



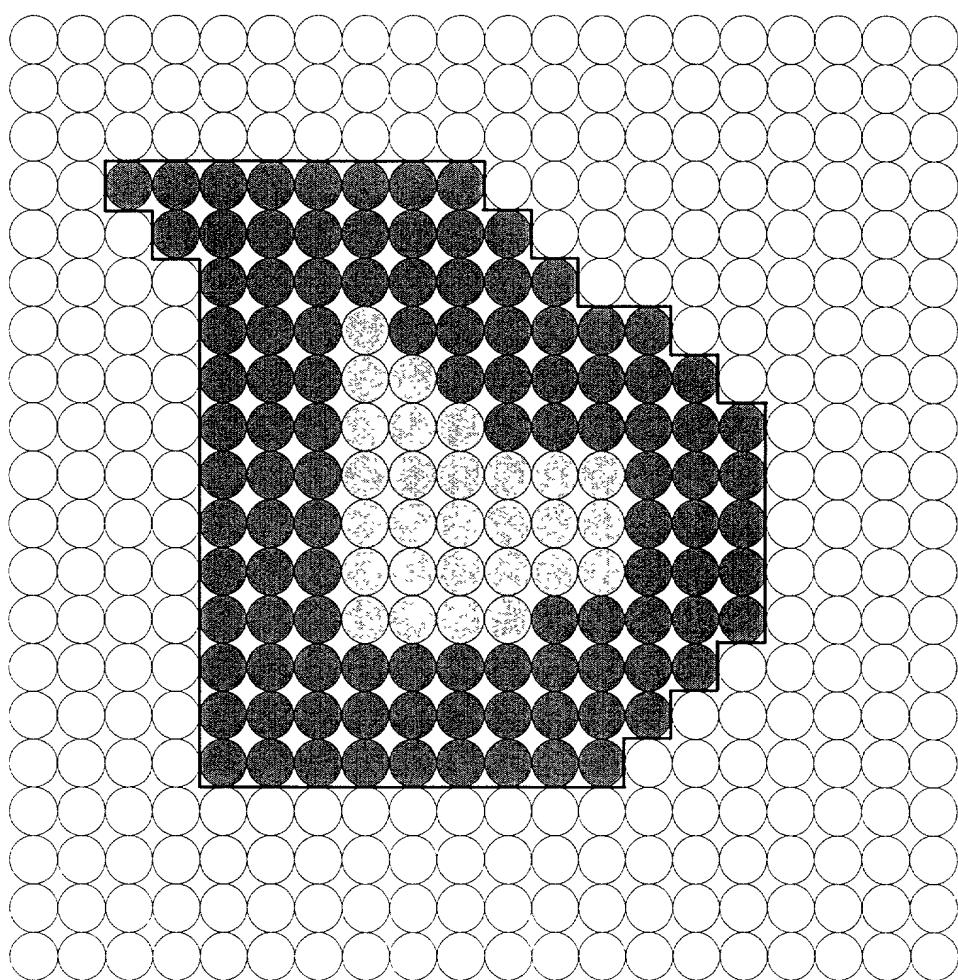


FIG. 15C

10006.000610-16004

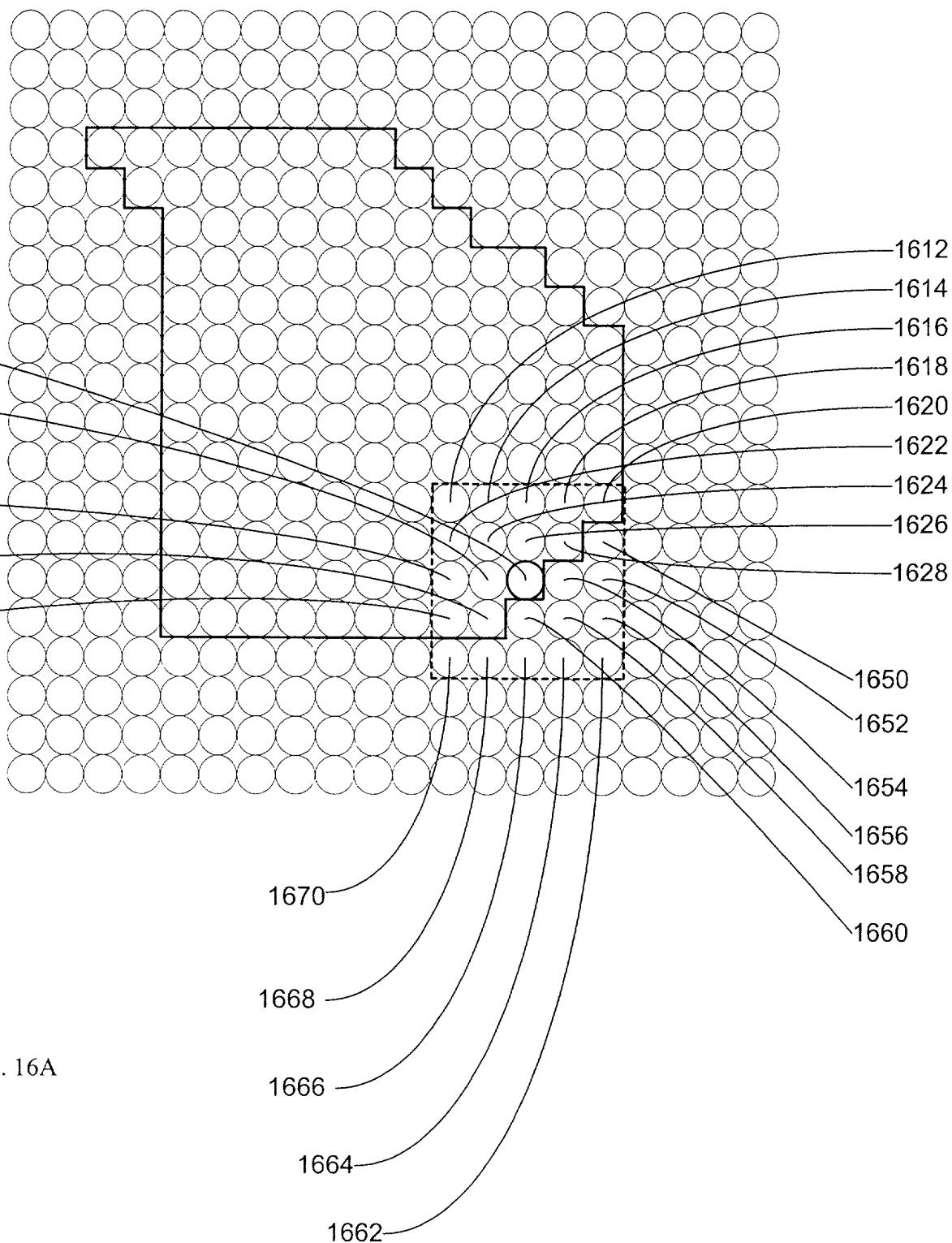


FIG. 16A

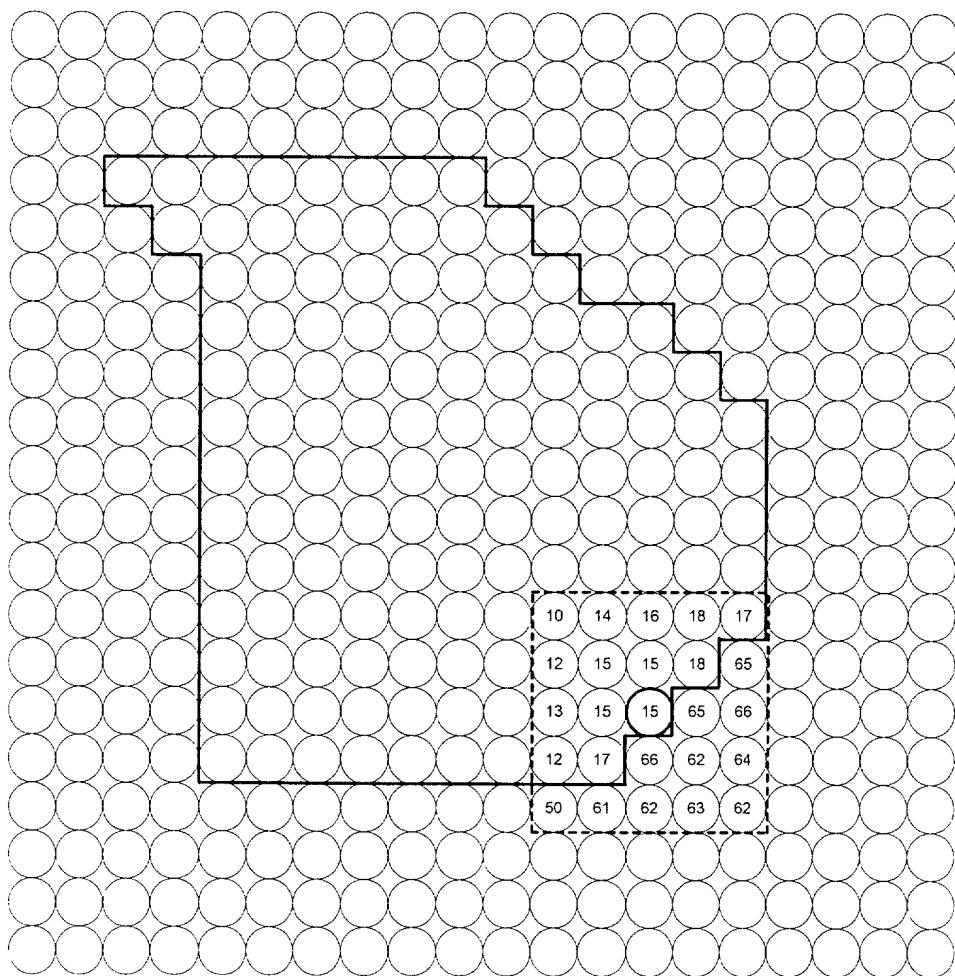
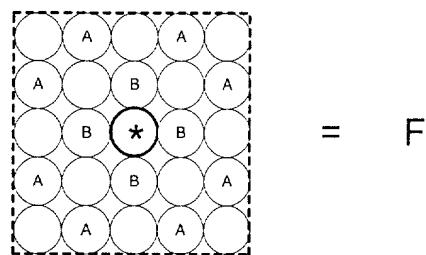


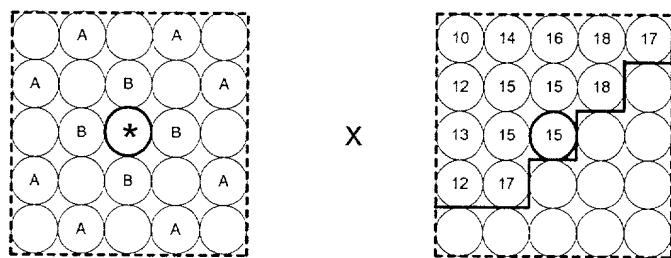
FIG. 16B



$$\begin{aligned}A &= -1/32 \\B &= 5/16\end{aligned}$$

FIG. 16C

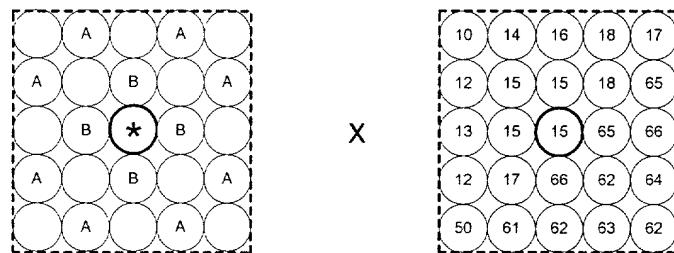
$$A = -1/32$$
$$B = 5/16$$



$$\text{Value of pixel } * = 5/16 (15+15) - 1/32 (14+18+12+12) = 7.62$$

FIG. 16D

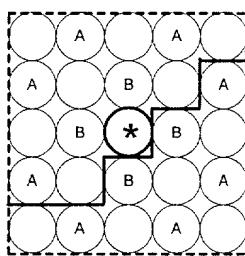
$$A = -1/32$$
$$B = 5/16$$



$$\text{Value of pixel*} = 5/16 (15+15+66+65) - 1/32 (14+18+65+64+63+61+12+12) = 40.65$$

FIG. 16E

$$A = -1/32$$
$$B = 5/16$$



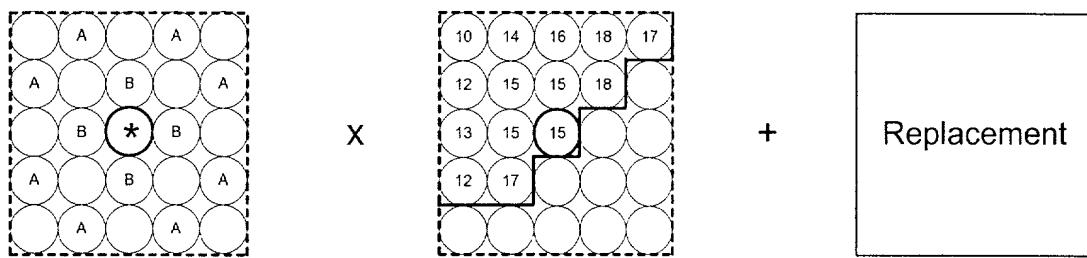
$$\Sigma \text{ weights inside} = 5/16 + 5/16 - 1/32 - 1/32 - 1/32 - 1/32 = 1/2 \neq 1$$

$$\text{Diff} = 1 - 1/2 = 1/2$$

FIG. 16F

$$A = -1/32$$

$$B = 5/16$$



Equation of $16D + \text{Diff} * (\text{Median inside the segment}) =$

$$7.62 + 1/2 (15) = 15.12$$

FIG. 16G

$$\begin{aligned} A &= -1/32 \\ B &= 5/16 \end{aligned}$$

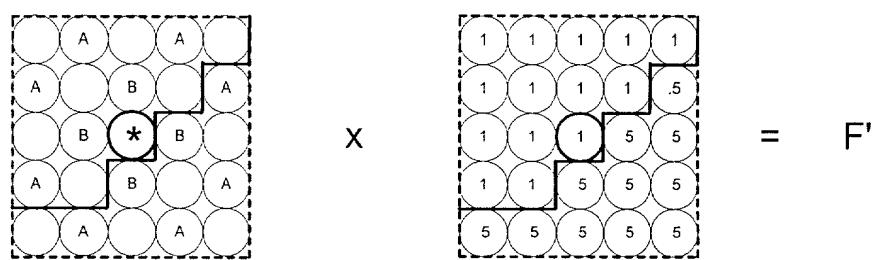
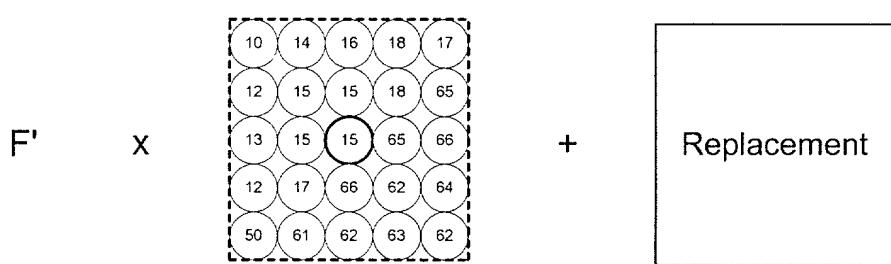


FIG. 16H



1/32(14+18+12+12) + 5/16(15+15) + 1/2[-1/32(65+64+63+61) + 5/16(66+65)]+ 1/2(15) = 31.64

FIG. 16I

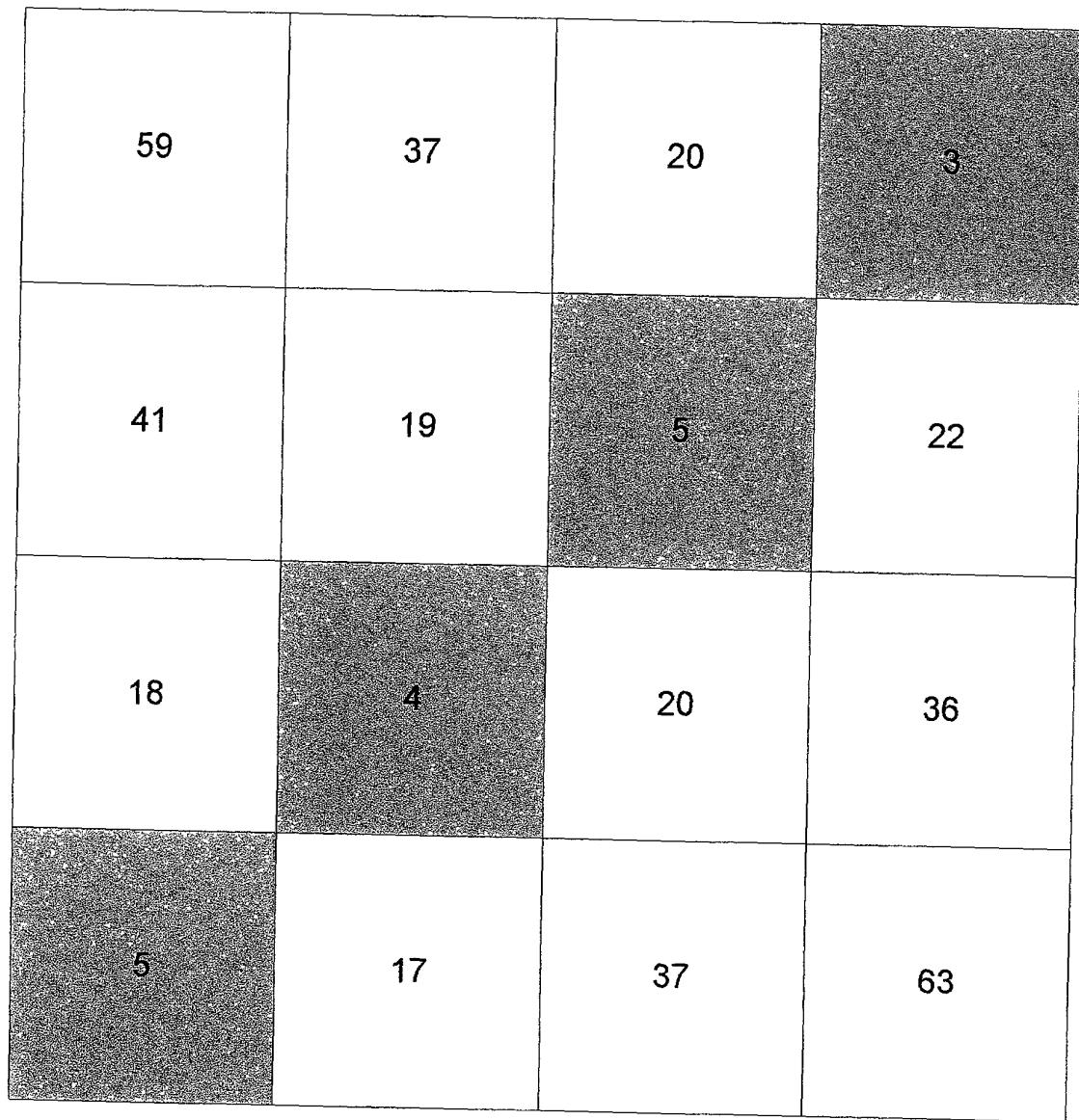
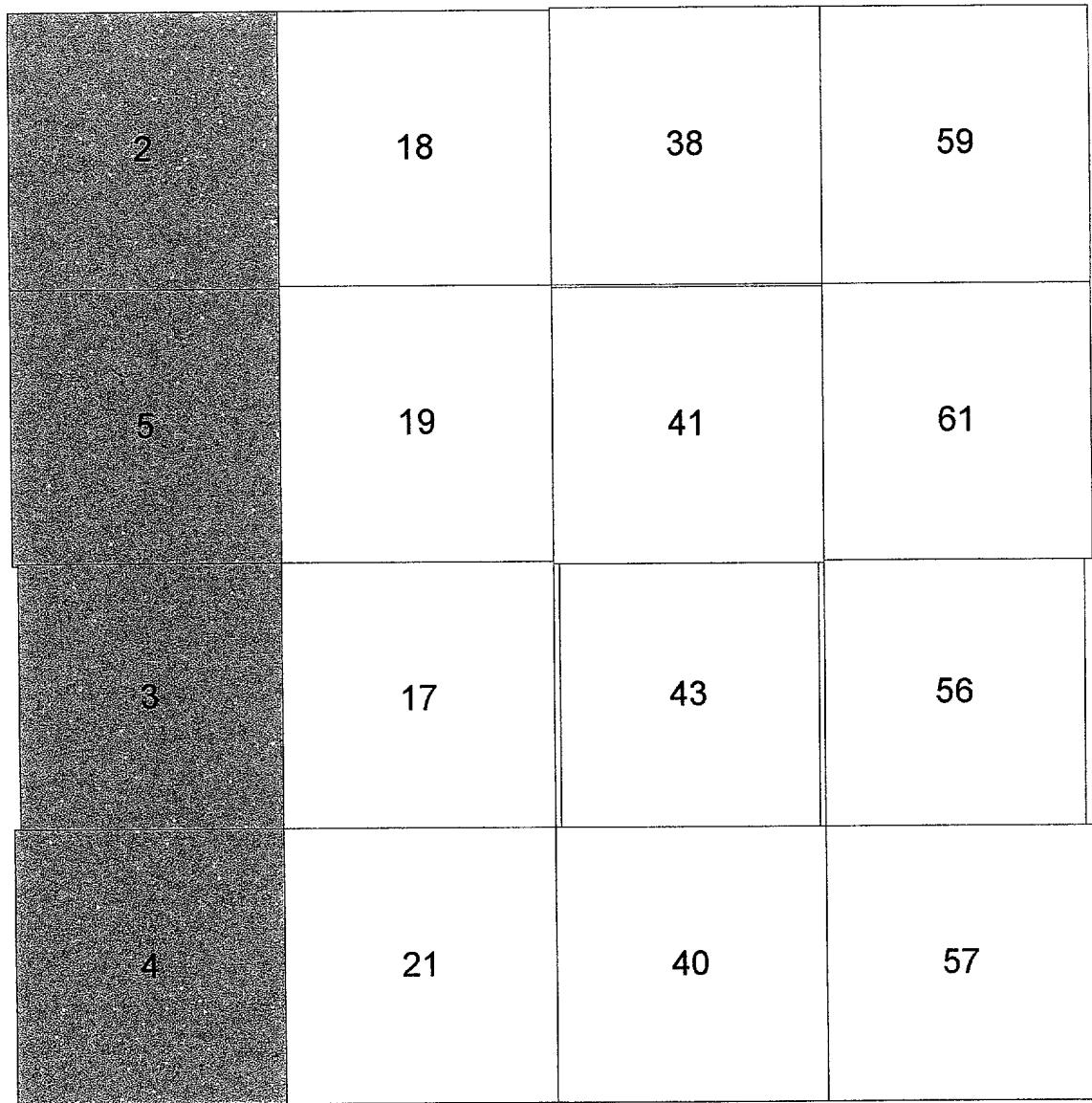


FIG. 17A

18	2	18	44
41	19	5	22
43	17	3	17
21	4	19	42

FIG. 17B



2	18	38	59
5	19	41	61
3	17	43	56
4	21	40	57

FIG. 17C

UNITED STATES PATENT AND TRADEMARK OFFICE
DOCUMENT CLASSIFICATION BARCODE SHEET



**Oath/Declaration, Small Entity,
and Power of Attorney**

8

Level - 2
Version 1.1
Updated - 8/01/01

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

**DECLARATION FOR UTILITY OR
DESIGN
PATENT APPLICATION
(37 CFR 1.63)**

Declaration Submitted With Initial Filing Declaration Submitted after Initial Filing (surcharge (37 CFR 1.16 (e)) required)

OR

Attorney Docket Number	10006.000610
First Named Inventor	Adityo Prakash
COMPLETE IF KNOWN	
Application Number	not yet known
Filing Date	December 19, 2001
Group Art Unit	not yet known
Examiner Name	not yet known

As a below named inventor, I hereby declare that:

My residence, post office address, and citizenship are as stated below next to my name.

I believe I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled:

ADAPTIVE TRANSFORMS

the specification of which *(Title of the Invention)*

is attached hereto

OR

was filed on (MM/DD/YYYY) as United States Application Number or PCT International

Application Number and was amended on (MM/DD/YYYY) (if applicable)

I hereby state that I have reviewed and understand the contents of the above identified specification, including the claims as amended specifically referred to above.

I acknowledge the duty to disclose information which is material to patentability as defined in 37 CFR 1.56, including for continuation-in-part applications, material information which became available between the filing date of the prior application and the national or PCT international filing date of the continuation-in-part application.

I hereby claim foreign priority benefits under 35 U.S.C. 119(a)-(d) or (f), or 365(b) of any foreign application(s) for patent, inventor's or plant breeder's rights certificate(s), or 365(a) of any PCT international application which designated at least one country other than the United States of America, listed below and have also identified below, by checking the box any foreign application(s) for patent, inventor's or plant breeder's rights certificate(s), or of any PCT international application having a filing date before that of the application on which priority is claimed.

Prior Foreign Application Number(s)	Country	Foreign Filing Date (MM/DD/YYYY) Country	Priority Not Claimed	YES	NO
			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Additional foreign application numbers are listed on a supplemental priority data sheet PTO/SB/02B attached hereto:

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Burden Hour Statement: This form is estimated to take 21 minutes to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.

DECLARATION — Utility or Design Patent Application

Direct all correspondence to: Customer Number
or Bar Code Label OR Correspondence address below

James K. Okamoto, Reg. No. 40,110
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I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under 18 U.S.C. 1001 and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

NAME OF SOLE OR FIRST INVENTOR: A petition has been filed for this unsigned inventor

Given Name (first and middle [if any])	Adityo	Family Name or Surname	Prakash
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Inventor's Signature	Date
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Redwood Shores Residence: City	CA State	U.S. Country	INDIA Citizenship
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Mailing Address

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NAME OF SECOND INVENTOR: A petition has been filed for this unsigned inventor

Given Name (first and middle [if any])	Edward	Family Name or Surname	Ratner
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Inventor's Signature	Date
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Residence: City	Sunnyvale	State	CA	Country	U.S.	Citizenship	U.S.
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Mailing Address 433 Crescent Avenue

City	Sunnyvale	State	CA	Zip	94087	Country	U.S.
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Additional inventors are being named on the 1 supplemental Additional Inventor(s) sheet(s) PTO/SB/02A attached hereto.

Please type a plus sign (+) inside this box → **+**

Approved for use through 10/31/2002. OMB 0651-0032

U.S. Patent and Trademark Office, U.S. DEPARTMENT OF COMMERCE

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DECLARATION**ADDITIONAL INVENTOR(S)**
Supplemental Sheet
Page 1 of 1

Name of Additional Joint Inventor, if any:		<input type="checkbox"/> A petition has been filed for this unsigned inventor				
Given Name (first and middle [if any])			Family Name or Surname			
Dimitri			Antsos			
Inventor's Signature				Date		
Residence: City	San Marino	State	CA	Country	U.S.	Citizenship
Mailing Address 534 S. Berkeley Avenue						
Mailing Address						
City	San Marino	State	CA	Zip	91108	Country
Name of Additional Joint Inventor, if any:		<input type="checkbox"/> A petition has been filed for this unsigned inventor				
Given Name (first and middle [if any])			Family Name or Surname			
Inventor's Signature				Date		
Residence: City		State		Country	Citizenship	
Mailing Address						
Mailing Address						
City		State		Zip		Country
Name of Additional Joint Inventor, if any:		<input type="checkbox"/> A petition has been filed for this unsigned inventor				
Given Name (first and middle [if any])			Family Name or Surname			
Inventor's Signature				Date		
Residence: City		State		Country	Citizenship	
Mailing Address						
Mailing Address						
City		State		Zip		Country

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